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NEWS 3 AUG 18 COMPENDEX indexing changed for the Corporate Source
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NEWS 4 AUG 24 ENCOMPLIT/ENCOMPLIT2 reloaded and enhanced
NEWS 5 AUG 24 CA/CAPLUS enhanced with legal status information for
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CAS REGISTRY
NEWS 7 SEP 11 WPIDS, WPINDEX, and WPIX now include Japanese FTERM
thesaurus
NEWS 8 OCT 21 Derwent World Patents Index Coverage of Indian and
Taiwanese Content Expanded
NEWS 9 OCT 21 Derwent World Patents Index enhanced with human
translated claims for Chinese Applications and
Utility Models
NEWS 10 NOV 23 Addition of SCAN format to selected STN databases
NEWS 11 NOV 23 Annual Reload of IFI Databases
NEWS 12 DEC 01 FRFULL Content and Search Enhancements
NEWS 13 DEC 01 DGENE, USGENE, and PCTGEN: new percent identity
feature for sorting BLAST answer sets

NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,
AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 16:42:14 ON 01 DEC 2009

=> file caplus

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TOTAL

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SESSION

FULL ESTIMATED COST

0.22

0.22

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FILE COVERS 1907 - 1 Dec 2009 VOL 151 ISS 23

FILE LAST UPDATED: 30 Nov 2009 (20091130/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s jp58048048/pn

L1 1 JP58048048/PN

=> d all

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1983:430757 CAPLUS

DN 99:30757

OREF 99:4755a,4758a

ED Entered STN: 12 May 1984

TI Far UV-resist materials

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

10551130

LA Japanese
IC G03C001-72
ICA C08F002-48; H01L021-30
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | JP 58048048 | A | 19830319 | JP 1981-147597 | 19810917 |
| <-- | | | | | |
| | JP 63049211 | B | 19881004 | | |
| PRAI | JP 1981-147597 | | 19810917 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|--|
| ----- | ---- | ----- |
| JP 58048048 | IC | G03C001-72 |
| | ICA | C08F002-48; H01L021-30 |
| | IPCI | G03C0001-72 [ICM]; C08F0002-48 [ICA]; C08F0002-46 [ICA,C*]; H01L0021-30 [ICA]; H01L0021-02 [ICA,C*] |
| | IPCR | G03F0007-20 [I,C*]; G03F0007-20 [I,A]; C08F0020-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-32 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A] |
| | ECLA | G03F007/039 |

AB Copolymers of 70-50 mol% benzyl methacrylate (I) and 3-50 mol% glycidyl methacrylate (II) are used for photoresist material to expose with far UV.

The copolymers give highly sensitive and dry etchable pos.-working resist for microlithog. Thus, I 30, II 20, and azobisisobutylnitril 0.09 part were dissolved in benzene and heated 6 h at 90° to give a copolymer whose weight-average mol. weight was 290,000. A 10% solution of the copolymer was

spin-coated on a Si wafer and the surface of which was oxidized by baking to form a resist layer of 1 μm thickness. The wafer was prebaked at 120° for 30 min, exposed with far UV for 30 min and developed with Me iso-Bu ketone. The exposed resist was sputter-etched in CF4 gas of

0.1 torr for 3 min at the power of 4.5 W/cm2. The reduced thickness of the resist layer after etching was 3200 Å, and the resist layer showed good resistance to dry etching.

ST photoresist UV sensitive pos working; benzyl methacrylate copolymer photoresist; glycidyl methacrylate copolymer photoresist

IT Resists
(photo-, pos.-working, UV-sensitive, benzyl methacrylate-glycidyl methacrylate copolymers as)

IT 86249-19-6

RL: USES (Uses)

(photoresist, UV-sensitive, pos.-working)

=> FIL REGISTRY

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

6.62

6.84

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| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| CA SUBSCRIBER PRICE | -0.82 | -0.82 |

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STRUCTURE FILE UPDATES: 30 NOV 2009 HIGHEST RN 1194522-11-6
DICTIONARY FILE UPDATES: 30 NOV 2009 HIGHEST RN 1194522-11-6

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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

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predicted properties as well as tags indicating availability of
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<http://www.cas.org/support/stngen/stdoc/properties.html>

=> S 86249-19-6/RN

L2 1 86249-19-6/RN

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=> D L2 SQIDE 1-

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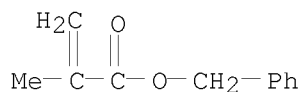
L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN
RN 86249-19-6 REGISTRY
CN 2-Propenoic acid, 2-methyl-, 2-oxiranylmethyl ester, polymer with
phenylmethyl 2-methyl-2-propenoate (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with
phenylmethyl 2-methyl-2-propenoate (9CI)
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with
oxiranylmethyl 2-methyl-2-propenoate (9CI)
OTHER NAMES:

10551130

CN Benzyl methacrylate-glycidyl methacrylate copolymer
MF (C11 H12 O2 . C7 H10 O3)x
CI PMS, COM
PCT Polyacrylic
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Conference; Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); RACT
(Reactant or reagent); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: PREP (Preparation);
USES (Uses)
RL.NP Roles from non-patents: PRP (Properties); USES (Uses)

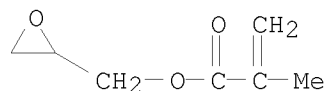
CM 1

CRN 2495-37-6
CMF C11 H12 O2



CM 2

CRN 106-91-2
CMF C7 H10 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

16 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
16 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> SET NOTICE LOGIN DISPLAY

NOTICE SET TO OFF FOR DISPLAY COMMAND
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=> file caplus

COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE

ENTRY

2.53

TOTAL

SESSION

9.37

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| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
|--|------------|---------|
| | ENTRY | SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -0.82 |

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FILE COVERS 1907 - 1 Dec 2009 VOL 151 ISS 23
FILE LAST UPDATED: 30 Nov 2009 (20091130/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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=> d his

(FILE 'HOME' ENTERED AT 16:42:14 ON 01 DEC 2009)

FILE 'CAPLUS' ENTERED AT 16:42:28 ON 01 DEC 2009
L1 1 S JP58048048/PN

FILE 'REGISTRY' ENTERED AT 16:43:24 ON 01 DEC 2009
L2 1 S 86249-19-6/RN
SET NOTICE 1 DISPLAY
SET NOTICE LOGIN DISPLAY

FILE 'CAPLUS' ENTERED AT 16:43:41 ON 01 DEC 2009

=> s 12
L3 16 L2

=> s 13 not 11
L4 15 L3 NOT L1

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=> d all1-15

'ALL1-15' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

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ABS ----- GI and AB
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CLASS ----- IPC, NCL, ECLA, FTERM
DALL ----- ALL, delimited (end of each field identified)
DMAX ----- MAX, delimited for post-processing
FAM ----- AN, PI and PRAI in table, plus Patent Family data
FBIB ----- AN, BIB, plus Patent FAM
IND ----- Indexing data
IPC ----- International Patent Classifications
MAX ----- ALL, plus Patent FAM, RE
PATS ----- PI, SO
SAM ----- CC, SX, TI, ST, IT
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ISTD ----- STD, indented with text labels

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OIBIB ----- OBIB, indented with text labels

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SIBIB ----- IBIB, no citations

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HITSTR ----- HIT RN, its text modification, its CA index name, and
 its structure diagram
HITSEQ ----- HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
 its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
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=> d all 1-15

L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2009:1200918 CAPLUS
DN 151:436915
ED Entered STN: 02 Oct 2009
TI Positive photosensitive resin composition and method of forming cured film

from the same

IN Takita, Satoshi

PA Fujifilm Corporation, Japan

SO PCT Int. Appl., 64pp.

CODEN: PIXXD2

DT Patent

LA Japanese

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| PI | WO 2009119878 | A1 | 20091001 | WO 2009-JP56555 | 20090330 |
| | W: | | | | |
| | AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| | RW: | | | | |
| | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | JP 2009258722 | A | 20091105 | JP 2009-82005 | 20090330 |
| | JP 2009258723 | A | 20091105 | JP 2009-82006 | 20090330 |
| PRAI | JP 2008-88537 | A | 20080328 | | |
| | JP 2008-88540 | A | 20080328 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| WO 2009119878 | IPC | G03F0007-039 [I,A]; C08F0020-28 [I,A]; C08F0020-42 [I,A]; C08F0020-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-40 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*] |

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IPCR G03F0007-039 [I,C]; G03F0007-039 [I,A]; C08F0020-00 [I,C]; C08F0020-28 [I,A]; C08F0020-42 [I,A]; G03F0007-004 [I,C]; G03F0007-004 [I,A]; G03F0007-40 [I,C]; G03F0007-40 [I,A]; H01L0021-02 [I,C]; H01L0021-027 [I,A]

JP 2009258722 IPCI G03F0007-039 [I,A]; G03F0007-004 [I,A]; G03F0007-075 [I,A]; G03F0007-40 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*]; C08G0059-68 [I,A]; C08G0059-00 [I,C*]; C08F0020-26 [I,A]; C08F0020-00 [I,C*]

FTERM 2H025/AA01; 2H025/AA04; 2H025/AA10; 2H025/AA11; 2H025/AA14; 2H025/AB14; 2H025/AB16; 2H025/AB17; 2H025/AC01; 2H025/AD03; 2H025/BE00; 2H025/BF02; 2H025/BG00; 2H025/CB13; 2H025/CB14; 2H025/CB41; 2H025/CC04; 2H025/CC06; 2H025/CC17; 2H025/CC20; 2H025/FA17; 2H025/FA29; 2H025/FA30; 2H096/AA25; 2H096/AA27; 2H096/AA28; 2H096/BA11; 2H096/EA02; 2H096/GA09; 2H096/HA01; 2H096/HA03; 4J036/AD08; 4J036/AF06; 4J036/AF08; 4J036/AJ08; 4J036/AK08; 4J036/AK11; 4J036/DA10; 4J036/FB03; 4J036/GA26; 4J036/HA01; 4J036/JA09; 4J100/AL08P; 4J100/BA04P; 4J100/BA05P; 4J100/BA06P; 4J100/BB01P; 4J100/BC04P; 4J100/BC43P; 4J100/CA05; 4J100/DA01; 4J100/DA04; 4J100/JA38

JP 2009258723 IPCI G03F0007-039 [I,A]; G03F0007-004 [I,A]; G03F0007-075 [I,A]; G03F0007-40 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*]; C08F0220-26 [I,A]; C08F0220-00 [I,C*]

FTERM 2H025/AA01; 2H025/AA04; 2H025/AA10; 2H025/AA11; 2H025/AA14; 2H025/AB14; 2H025/AB16; 2H025/AB17; 2H025/AC01; 2H025/AD03; 2H025/BE00; 2H025/BF02; 2H025/BG00; 2H025/CC04; 2H025/CC06; 2H025/CC17; 2H025/CC20; 2H025/FA17; 2H025/FA29; 2H025/FA30; 2H096/AA25; 2H096/AA27; 2H096/AA28; 2H096/BA11; 2H096/EA02; 2H096/GA09; 2H096/HA01; 2H096/HA03; 4J100/AB07Q; 4J100/AL08P; 4J100/AL08Q; 4J100/AL08R; 4J100/AL09R; 4J100/AL10Q; 4J100/BA02P; 4J100/BA02Q; 4J100/BC04P; 4J100/BC43P; 4J100/BC43Q; 4J100/BC43R; 4J100/BC54Q; 4J100/CA03; 4J100/CA04; 4J100/CA05; 4J100/JA37

OS MARPAT 151:436915

AB The invention relates to a pos. photosensitive resin composition characterized

by comprising: a resin which has a specific acrylic-acid-type structural unit generating a carboxy group upon dissociation of a dissociable group, is

alkali-insol. or sparingly alkali-soluble, and becomes alkali-soluble upon

dissociation of the acid-dissociable group; a resin containing a structural unit

derived from an epoxidized radical-polymerizable monomer; a compound having

two or more epoxy groups per mol. (provided that the resin containing a structural unit derived from an epoxidized radical-polymerizable monomer is excluded); and a compound which generates an acid upon irradiation with

10551130

actinic rays having a wavelength of 300 nm or longer. Also provided is a method of forming a cured film such as smoothing layers, protective layers, interlayer-insulating layers, etc. from the composition

ST pos photosensitive resin cured film

IT Positive photoresists
(permanent pos. photoresist; pos. photosensitive resin composition and method of forming cured film from the same)

IT Photoimaging materials
Semiconductor device fabrication
(pos. photosensitive resin composition and method of forming cured film from the same)

IT Polymers
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. photosensitive resin composition and method of forming cured film from the same)

IT 204993-57-7, CGI 725
RL: TEM (Technical or engineered material use); USES (Uses)
(CGI 725; pos. photosensitive resin composition and method of forming cured film from the same)

IT 852246-54-9, Irgacure PAG 108
RL: TEM (Technical or engineered material use); USES (Uses)
(Irgacure PAG 108; pos. photosensitive resin composition and method of forming cured film from the same)

IT 86249-19-6P, Glycidyl methacrylate-benzyl methacrylate copolymer
155161-74-3P, Glycidyl methacrylate-benzyl methacrylate-methacrylic acid copolymer 293735-10-1P, (3,4-Epoxy cyclohexyl)methyl methacrylate-benzyl methacrylate-methacrylic acid copolymer 1138028-34-8P, 1-Butoxyethyl methacrylate-benzyl methacrylate-methacrylic acid copolymer 1138028-35-9P, Ethanol, 1-(benzyloxy)-, methacrylate-2-hydroxyethyl methacrylate copolymer 1138028-36-0P, 1-Ethoxyethyl methacrylate-benzyl methacrylate-2-hydroxyethyl methacrylate copolymer 1138028-37-1P, 1-Ethoxyethyl methacrylate-benzyl methacrylate-methacrylic acid copolymer 1138028-38-2P, 1-Cyclohexyloxyethyl methacrylate-p-methoxystyrene copolymer 1138028-39-3P, Tetrahydropyranyl methacrylate-p-acetoxystyrene-2-hydroxyethyl methacrylate copolymer 1138028-40-6P, Glycidyl acrylate-2-hydroxyethyl methacrylate-p-acetoxystyrene copolymer 1138028-41-7P, Glycidyl p-vinylphenyl ether-1-ethoxyethyl methacrylate-p-acetoxystyrene copolymer 1138028-42-8P, Glycidyl methacrylate-1-ethoxyethyl methacrylate-2-hydroxyethyl methacrylate copolymer 1138028-43-9P, Glycidyl methacrylate-1-ethoxyethyl methacrylate-2-hydroxyethyl methacrylate-benzyl methacrylate copolymer
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. photosensitive resin composition and method of forming cured film from the same)

IT 25068-38-6, JER 834 138361-24-7, Epikote 157S70 219651-50-0, CGI 1380 852246-52-7, Irgacure PAG121 955090-22-9, JER 1001 1042720-07-9, Irgacure PAG 103 1058132-49-2, JER 154
RL: TEM (Technical or engineered material use); USES (Uses)

10551130

(pos. photosensitive resin composition and method of forming cured film from

the same)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE CITED REFERENCES

- (1) E I Du Pont de Nemours & Co; JP 05-506731 A 1993
- (2) E I Du Pont de Nemours & Co; WO 1991015808 A1 1993
- (3) E I Du Pont de Nemours & Co; US 5120633 A 1993 CAPLUS
- (4) E I Du Pont de Nemours & Co; EP 524250 A 1993 CAPLUS
- (5) E I Du Pont de Nemours & Co; US 5262281 A 1993 CAPLUS
- (6) Fujifilm Corp; WO 2008149947 A1 2008 CAPLUS
- (7) Fujifilm Corp; WO 2009041619 A1 2009 CAPLUS
- (8) JSR Corp; KR 1020040078554 A 2004
- (9) JSR Corp; JP 2004264623 A 2004 CAPLUS
- (10) JSR Corp; TW 266889 B 2004 CAPLUS
- (11) Kyowa Hakko Chemical Co Ltd; JP 2006251296 A 2006 CAPLUS
- (12) Shin-Etsu Chemical Co Ltd; KR 1020070119523 A 2007
- (13) Shin-Etsu Chemical Co Ltd; US 20070292768 A1 2007 CAPLUS
- (14) Shin-Etsu Chemical Co Ltd; JP 2007333933 A 2007 CAPLUS

L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:751430 CAPLUS

DN 151:125286

ED Entered STN: 23 Jun 2009

TI Alkali-soluble resins for photosensitive resin compositions with good adhesion, developability, and compatibility

IN Heo, Yun Hui; Ahn, Jeong Ae; Kim, Han Su; Lim, Min Yeong; Yoo, Ji Heum; Kim, Seon Hwa

PA LG Chem, Ltd., S. Korea

SO Repub. Korean Kongkae Taeho Kongbo, 16pp.

CODEN: KRXXA7

DT Patent

LA Korean

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74

FAN.CNT 1

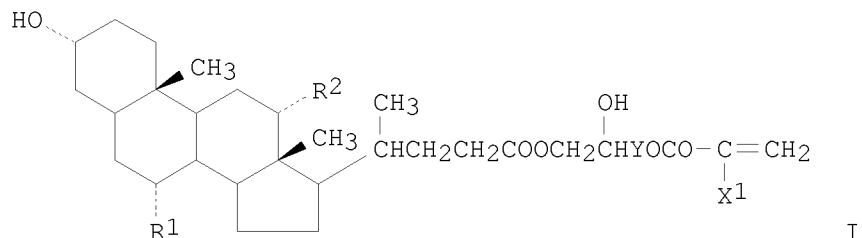
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | KR 2009061878 | A | 20090617 | KR 2007-128867 | 20071212 |
| PRAI | KR 2007-128867 | | 20071212 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|---|
| | IPCI | C08F0220-00 [I,A]; C08F0220-10 [I,A]; C08F0210-00 [I,A]; G03F0007-027 [I,A] |
| | IPCR | C08F0220-00 [I,C]; C08F0220-00 [I,A]; C08F0210-00 [I,C]; C08F0210-00 [I,A]; C08F0220-10 [I,A]; G03F0007-027 [I,C]; G03F0007-027 [I,A] |

GI

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- AB Title alkali-soluble resins comprises repeated units $\text{CH}_2\text{:CAX1}$, $\text{CH}_2\text{:CHX2OCOCH}_2\text{CH(OCOZCO}_2\text{H)YOCOCHX1:CH}_2$, and I, wherein A = Ph, benzyloxycarbonyl, methyloxycarbonyl, ethyloxycarbonyl, isobutyloxycarbonyl, t-butyloxycarbonyl, cyclohexyloxycarbonyl, or isobornyloxycarbonyl; X1, X2 = H, C1-3 alkyl or alkoxy; Y = C1-3 alkylene, ethylene oxide, or propylene oxide; Z = C1-3 alkylene, cyclohexenylene, cyclohexanylene or phenylene; and R1, R2 = H or OH.
- ST alkali soluble resin photosensitive compn adhesion developability compatibility
- IT Photoresists
(alkali-soluble resins for photosensitive resin compns. with good adhesion, developability, and compatibility)
- IT 1169867-01-9P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(alkali-soluble resins for photosensitive resin compns. with good adhesion, developability, and compatibility)
- IT 86249-19-6P, Benzyl methacrylate-glycidyl methacrylate copolymer
1169866-99-2P 1169867-00-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
- RACT (Reactant or reagent)
(alkali-soluble resins for photosensitive resin compns. with good adhesion, developability, and compatibility)
- IT 80-62-6D, Methyl methacrylate, copolymers 85-43-8D, ester with hydroxy-containing polymers 85-44-9D, Phthalic anhydride, ester with hydroxy-containing polymers 96-33-3D, Methyl acrylate, copolymers 97-63-2D, Ethyl methacrylate, copolymers 97-86-9D, Isobutyl methacrylate, copolymers 97-90-5D, Ethylene glycol dimethacrylate, copolymers 100-42-5D, Styrene, copolymers 101-43-9D, Cyclohexyl methacrylate, copolymers 106-63-8D, Isobutyl acrylate, copolymers 108-30-5D, Succinic anhydride, ester with hydroxy-containing polymers 140-88-5D, Ethyl acrylate, copolymers 585-07-9D, tert-Butyl methacrylate, copolymers 1121-34-2D, Malic anhydride, ester with hydroxy-containing polymers 1663-39-4D, tert-Butyl acrylate, copolymers 2274-11-5D, Ethylene glycol diacrylate, copolymers 2495-35-4D, Benzyl acrylate, copolymers 2495-37-6D, Benzyl methacrylate, copolymers 3066-71-5D, Cyclohexyl acrylate, copolymers 3253-41-6D, Pentaerythritol tetramethacrylate, copolymers 3524-66-1D, Pentaerythritol trimethacrylate, copolymers 3524-68-3D, Pentaerythritol triacrylate, copolymers 4986-89-4D, Pentaerythritol tetraacrylate, copolymers 5888-33-5D, Isobornyl acrylate, copolymers 7534-94-3D, Isobornyl

10551130

methacrylate, copolymers 25852-47-5D, Polyethylene glycol
dimethacrylate, copolymers 26570-48-9D, Polyethylene glycol diacrylate,
copolymers

RL: TEM (Technical or engineered material use); USES (Uses)
(alkali-soluble resins for photosensitive resin compns. with good
adhesion, developability, and compatibility)

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2009:385185 CAPLUS
DN 150:410239
ED Entered STN: 02 Apr 2009
TI Positive-type photosensitive resin composition, and method for formation
of cured film using the same
IN Takita, Satoshi
PA Fujifilm Corporation, Japan
SO PCT Int. Appl., 51pp.
CODEN: PIXXD2
DT Patent
LA Japanese
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| | ----- | --- | ----- | ----- | ----- |
| PI | WO 2009041619 | A1 | 20090402 | WO 2008-JP67496 | 20080926 |
| | W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| | RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | JP 2009098673 | A | 20090507 | JP 2008-246883 | 20080925 |
| PRAI | JP 2007-256203 | A | 20070928 | | |
| | JP 2008-246883 | A | 20080925 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| ----- | --- | ----- |
| WO 2009041619 | IPCI | G03F0007-039 [I,A]; G03F0007-004 [I,A]; G03F0007-40 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*] |
| | IPCR | G03F0007-039 [I,C]; G03F0007-039 [I,A]; G03F0007-004 [I,C]; G03F0007-004 [I,A]; G03F0007-40 [I,C]; G03F0007-40 [I,A]; H01L0021-02 [I,C]; H01L0021-027 [I,A] |
| JP 2009098673 | IPCI | G03F0007-039 [I,A]; G03F0007-004 [I,A]; G03F0007-40 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*]; H01L0051-50 [I,A]; H05B0033-10 [I,A]; H05B0033-22 [I,A]; G02F0001-1333 [I,A]; G02F0001-13 [I,C*]; C08F0020-28 [I,A]; C08F0020-00 [I,C*]; G03F0007-075 |

[I,A]

IPCR G03F0007-039 [I,C]; G03F0007-039 [I,A]; C08F0020-00 [I,C]; C08F0020-28 [I,A]; G02F0001-13 [I,C]; G02F0001-1333 [I,A]; G03F0007-004 [I,C]; G03F0007-004 [I,A]; G03F0007-075 [I,C]; G03F0007-075 [I,A]; G03F0007-40 [I,C]; G03F0007-40 [I,A]; H01L0021-02 [I,C]; H01L0021-027 [I,A]; H01L0051-50 [I,C]; H01L0051-50 [I,A]; H05B0033-10 [I,C]; H05B0033-10 [I,A]; H05B0033-22 [I,C]; H05B0033-22 [I,A]

FTERM 2H025/AA01; 2H025/AA04; 2H025/AA10; 2H025/AA11; 2H025/AA14; 2H025/AB14; 2H025/AB16; 2H025/AC01; 2H025/AD03; 2H025/BE00; 2H025/BF02; 2H025/BF15; 2H025/BG00; 2H025/CC04; 2H025/CC06; 2H025/CC20; 2H025/FA17; 2H025/FA29; 2H025/FA30; 2H090/HB11X; 2H090/HB13X; 2H090/HC11; 2H090/HC13; 2H090/HC15; 2H090/HD08; 2H096/AA25; 2H096/AA27; 2H096/AA28; 2H096/BA11; 2H096/EA02; 2H096/GA09; 2H096/HA01; 2H096/HA03; 3K107/AA01; 3K107/CC21; 3K107/CC45; 3K107/DD90; 3K107/DD97; 3K107/FF13; 3K107/GG06; 3K107/GG11; 4J100/AB07Q; 4J100/AJ02R; 4J100/AL08P; 4J100/AL08Q; 4J100/AL08R; 4J100/BA02P; 4J100/BA03Q; 4J100/BA03R; 4J100/BA04P; 4J100/BA05Q; 4J100/BA06P; 4J100/BA14Q; 4J100/BC04P; 4J100/BC43P; 4J100/BC43Q; 4J100/BC53P; 4J100/CA04; 4J100/CA05; 4J100/DA01; 4J100/DA04; 4J100/DA38; 4J100/JA38

OS MARPAT 150:410239

AB Disclosed is a pos.-type photosensitive resin composition comprising: a resin which has a specific acrylic acid-type constituent unit whose dissociating group can be dissociated to produce a carboxyl group, which is insol. or poorly soluble in an alkali, and whose acid-dissociating group can be dissociated to render the resin alkali-soluble; a resin which has a constituent unit having a functional group capable of reacting with a carboxyl group to form a covalent bond; and a compound which can generate an acid upon being irradiated with an active ray or an radioactive ray. The pos.-type photosensitive resin composition is excellent in sensitivity, percentage residual film and storage stability. Also disclosed is a cured film produced by a cured film formation method using the pos.-type photosensitive resin composition. The cured film is excellent in heat resistance, an adhesion property, transmittance and the like.

ST pos photosensitive resin compn cured film acid generator

IT Dielectric films

Photoimaging materials

Semiconductor device fabrication

(pos.-type photosensitive resin composition, and method for formation of cured film using the same)

IT Coating materials

(protective layer; pos.-type photosensitive resin composition, and method for formation of cured film using the same)

IT 204993-57-7 852246-52-7 852246-54-9 852246-55-0 1138028-44-0

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RL: CAT (Catalyst use); USES (Uses)
(acid generator in pos.-type photosensitive resin composition)

IT 86249-19-6P 155161-74-3P 293735-10-1P 1138028-34-8P
1138028-35-9P 1138028-36-0P 1138028-37-1P 1138028-38-2P
1138028-39-3P 1138028-40-6P 1138028-41-7P 1138028-42-8P
1138028-43-9P
RL: POF (Polymer in formulation); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)
(resin in pos.-type photosensitive resin composition)

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

UPOS.G Date last citing reference entered STN: 09 Oct 2009

OS.G CAPLUS 2009:1200918

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE CITED REFERENCES

- (1) Ciba Specialty Chemicals Holding Inc; KR 1020060064700 A 2002
- (2) Ciba Specialty Chemicals Holding Inc; WO 1999001429 A1 2002
- (3) Ciba Specialty Chemicals Holding Inc; JP 2002508774 A 2002
- (4) Ciba Specialty Chemicals Holding Inc; TW 550439 B 2002 CAPLUS
- (5) Ciba Specialty Chemicals Holding Inc; US 6004724 A 2002 CAPLUS
- (6) Ciba Specialty Chemicals Holding Inc; DE 69807489 D 2002
- (7) Ciba Specialty Chemicals Holding Inc; DE 69807489 T 2002
- (8) Ciba Specialty Chemicals Holding Inc; AU 8628198 A 2002
- (9) Ciba Specialty Chemicals Holding Inc; EP 993445 A 2002 CAPLUS
- (10) Kyowa Hakko Chemical Co Ltd; JP 2006251296 A 2006 CAPLUS
- (11) NEC Corp; JP 2007186680 A 2007 CAPLUS
- (12) Sumitomo Chemical Co Ltd; JP 2003195506 A 2003 CAPLUS
- (13) Tokyo Ohka Kogyo Co Ltd; CN 101065709 A 2006 CAPLUS
- (14) Tokyo Ohka Kogyo Co Ltd; KR 1020070072607 A 2006
- (15) Tokyo Ohka Kogyo Co Ltd; EP 1817634 A 2006 CAPLUS
- (16) Tokyo Ohka Kogyo Co Ltd; WO 2006059747 A1 2006 CAPLUS
- (17) Tokyo Ohka Kogyo Co Ltd; JP 2006154569 A 2006 CAPLUS

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2008:1259816 CAPLUS

DN 149:534985

ED Entered STN: 20 Oct 2008

TI heat-curable film-forming resin compositions used for protection of color
filter in liquid crystal displays

IN Zhang, Xiaoyu

PA BYD Company Limited, Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 17pp.
CODEN: CNXXEV

DT Patent

LA Chinese

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 74

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------------------|------|----------|------------------|----------|
| PI CN 101284891 | A | 20081015 | CN 2007-10090505 | 20070409 |
| PRAI CN 2007-10090505 | | 20070409 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|--|
| | IPCI | C08F0220-32 [I,A]; C08F0220-00 [I,C*]; C08K0005-36 |

[I,A]; C08K0005-00 [I,C*]; G02B0005-23 [I,A];
G02B0005-22 [I,C*]; G02F0001-1335 [N,A]; G02F0001-13
[N,C*]
IPCR C08F0220-00 [I,C]; C08F0220-32 [I,A]; C08K0005-00
[I,C]; C08K0005-36 [I,A]; G02B0005-22 [I,C];
G02B0005-23 [I,A]; G02F0001-13 [I,C]; G02F0001-1335
[I,A]

AB The compns., having high storage stability, comprise a unit A and a unit
B
at a mol. ratio of (1-8):1, wherein unit A is acrylate containing epoxy
group;
unit B is one or more of benzyl (meth)acrylate, phenylethyl
(meth)acrylate, and Ph (meth)acrylate; the weight average mol. weight of
the
film-forming resin is 5000-100,000. Thus, dripping mixture of 80 parts
glycidyl methacrylate and 20 parts benzyl methacrylate in AIBN 2.5,
propylene glycol Me ether acetate 50 and ethylene glycol Bu ether acetate
50 parts to a mixed solvents containing 20 parts propylene glycol Me
ether
acetate and 20 parts ethylene glycol Bu ether acetate and polymerizing at
80° gave a film-forming resin, which was added with a curing agent
containing 6.5 parts trimellitic anhydride and 6.5 parts ST 1000 (epoxy
resin), 12 parts γ -glycidoxypropyltrimethoxysilane, 0.2 parts FC
4430, 30 parts propylene glycol Me ether acetate and 30 parts ethylene
glycol Bu ether acetate to give a title composition

ST methacrylate heat curable filmforming compn color filter protection
IT Crosslinking agents
(preparation of heat-curable film-forming resin compns. used for
protection
of color filter)

IT Epoxy resins, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of heat-curable film-forming resin compns. used for
protection
of color filter)

IT 86249-19-6P, Benzyl methacrylate-glycidyl methacrylate copolymer
1075277-49-4P 1075277-50-7P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(preparation of heat-curable film-forming resin compns. used for
protection
of color filter)

IT 2530-83-8, γ -Glycidoxypropyltrimethoxysilane 620961-93-5, FC 4430
RL: MOA (Modifier or additive use); USES (Uses)
(preparation of heat-curable film-forming resin compns. used for
protection
of color filter)

IT 112-07-2, Ethylene glycol butyl ether acetate 10471-14-4,
1-Methoxy-1-ethoxyethane 84540-57-8, Propylene glycol methyl ether
acetate
RL: NUU (Other use, unclassified); USES (Uses)
(preparation of heat-curable film-forming resin compns. used for
protection
of color filter)

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IT 106-90-1D, Glycidyl acrylate, polymer with Ph derivs. (meth)acrylates
106-91-2D, Glycidyl methacrylate, polymer with Ph derivs. (meth)acrylates
2177-70-0D, Phenyl methacrylate, polymer with epoxy-bearing
(meth)acrylates 2495-37-6D, Benzyl methacrylate, polymer with
epoxy-bearing (meth)acrylates 3683-12-3D, Phenethyl methacrylate,
polymer with epoxy-bearing (meth)acrylates 55750-22-6D, 3,4-Epoxybutyl
methacrylate, polymer with Ph derivs. (meth)acrylates 62066-42-6D,
polymer with Ph derivs. (meth)acrylates 69960-59-4D, polymer with Ph
derivs. (meth)acrylates 83201-25-6D, 3,4-Epoxybutyl acrylate, polymer
with Ph derivs. (meth)acrylates 212963-28-5D, polymer with Ph derivs.
(meth)acrylates 1075277-51-8D, polymer with Ph derivs. (meth)acrylates
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)

(preparation of heat-curable film-forming resin compns. used for
protection
of color filter)

IT 85-42-7, Hexahydrophthalic anhydride 85-44-9, Phthalic anhydride
89-32-7, Pyromellitic anhydride 552-30-7, Trimellitic anhydride
2426-02-0 26283-70-5 26590-20-5, Methyltetrahydrophthalic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of heat-curable film-forming resin compns. used for
protection
of color filter)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:1284428 CAPLUS

DN 146:52543

ED Entered STN: 08 Dec 2006

TI Pigment-containing heat-curable composition, color filter,
image-recording

material, and producing color filter

IN Yamada, Toru

PA Fuji Photo Film Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 28pp.

CODEN: USXXCO

DT Patent

LA English

INCL 430007000; 430271100

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 37, 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | US 20060275676 | A1 | 20061207 | US 2006-446396 | 20060605 |
| | KR 2006126404 | A | 20061207 | KR 2006-49930 | 20060602 |
| | JP 2007011324 | A | 20070118 | JP 2006-155227 | 20060602 |
| | JP 2007023262 | A | 20070201 | JP 2006-155228 | 20060602 |
| PRAI | JP 2005-164840 | A | 20050603 | | |
| | JP 2005-173750 | A | 20050614 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
| ----- | ---- | ----- |

| | | |
|----------------|------|----------------------|
| US 20060275676 | INCL | 430007000; 430271100 |
| | IPCI | G02B0005-20 [I,A] |

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IPCR G02B0005-20 [I,C]; G02B0005-20 [I,A]
NCL 430/007.000; 430/271.100
ECLA G02B005/20; C08J003/20
KR 2006126404 IPCI C08L0063-00 [I,A]; C08J0003-02 [I,A]
ECLA G02B005/20; C08J003/20
JP 2007011324 IPCI G02B0005-20 [I,A]; G03F0007-004 [I,A]; G03F0007-40
[I,A]; G03F0007-11 [I,A]; G02F0001-1335 [I,A];
G02F0001-13 [I,C*]
IPCR G02B0005-20 [I,C]; G02B0005-20 [I,A]; G02F0001-13
[I,C]; G02F0001-1335 [I,A]; G03F0007-004 [I,C];
G03F0007-004 [I,A]; G03F0007-11 [I,C]; G03F0007-11
[I,A]; G03F0007-40 [I,C]; G03F0007-40 [I,A]
FTERM 2H025/AA03; 2H025/AA14; 2H025/AA17; 2H025/AB13;
2H025/AC01; 2H025/AD01; 2H025/BC13; 2H025/BC42;
2H025/CA00; 2H025/CC11; 2H025/DA31; 2H025/DA39;
2H025/FA17; 2H025/FA35; 2H025/FA41; 2H048/BA02;
2H048/BA11; 2H048/BA43; 2H048/BA45; 2H048/BA48;
2H048/BB02; 2H048/BB42; 2H048/BB46; 2H091/FA04Y;
2H091/FB03; 2H091/FC10; 2H091/FD04; 2H091/LA12;
2H091/LA30; 2H096/AA27; 2H096/AA30; 2H096/BA05;
2H096/CA06; 2H096/EA02; 2H096/GA08; 2H096/GA36;
2H096/HA07; 2H096/HA23; 2H096/JA04; 2H096/KA02
JP 2007023262 IPCI C08L0101-00 [I,A]; G03F0007-11 [I,A]; G03F0007-105
[I,A]; G03F0007-09 [I,C*]; G03F0007-40 [I,A];
G02B0005-20 [I,A]; C08K0003-00 [I,A]; C08K0005-00
[I,A]
IPCR C08L0101-00 [I,C]; C08L0101-00 [I,A]; C08K0003-00
[I,C]; C08K0003-00 [I,A]; C08K0005-00 [I,C];
C08K0005-00 [I,A]; G02B0005-20 [I,C]; G02B0005-20
[I,A]; G03F0007-09 [I,C]; G03F0007-105 [I,A];
G03F0007-11 [I,C]; G03F0007-11 [I,A]; G03F0007-40
[I,C]; G03F0007-40 [I,A]
FTERM 2H025/AB13; 2H025/AC01; 2H025/DA31; 2H025/FA41;
2H048/BA02; 2H048/BA45; 2H048/BA47; 2H048/BB02;
2H048/BB42; 2H096/AA28; 2H096/CA05; 2H096/EA02;
2H096/HA23; 2H096/JA04; 4J002/BF051; 4J002/CC161;
4J002/CC181; 4J002/CC191; 4J002/CD021; 4J002/CD051;
4J002/CD061; 4J002/CF011; 4J002/CF211; 4J002/CK021;
4J002/CP031; 4J002/DE076; 4J002/DE086; 4J002/DE096;
4J002/DE116; 4J002/DE126; 4J002/DE136; 4J002/DE146;
4J002/EA057; 4J002/ED027; 4J002/EE037; 4J002/EH037;
4J002/EH157; 4J002/EL067; 4J002/FD096; 4J002/GP00;
4J002/HA01

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The pigment-containing heat-curable composition including a pigment dispersion

solution is obtained by dispersing a heat-curable resin, a solvent, and a pigment, where the concentration of the pigment 50-100% with respect to the total solid contents.

ST color filter dry etch film pigmented epoxy resin dispersion; photoimaging material pigmented epoxy resin dispersion

IT Epoxy resins, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

10551130

(binder; pigment-containing heat-curable composition for manufacturing color filter)
IT Negative photoresists
Positive photoresists
(laminate; pigment-containing heat-curable composition for manufacturing color filter)
IT Optical filters
Photoimaging materials
Pigments, nonbiological
(pigment-containing heat-curable composition for manufacturing color filter)
IT 65697-21-4, Benzyl methacrylate/methacrylic acid copolymer 149984-16-7, Epolead GT 401
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(binder; pigment-containing heat-curable composition for manufacturing color filter)
IT 86249-19-6, Benzyl methacrylate-glycidyl methacrylate copolymer 244772-00-7, EHPE-3150
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; pigment-containing heat-curable composition for manufacturing color filter)
IT 916515-96-3, Benzyl methacrylate-Methacrylic acid-methyl methacrylate-Pentaerythritol tetraacrylate copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photoresist; pigment-containing heat-curable composition for manufacturing color filter)
IT 893072-86-1, FHi 3950
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist; pigment-containing heat-curable composition for manufacturing color filter)

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:450794 CAPLUS
DN 142:490400
ED Entered STN: 27 May 2005
TI Bottom antireflective coatings
IN Yao, Huirong; Ding-Lee, Shuji; Wu, Hengpeng; Xiang, Zhong
PA Az Electronic Materials Usa Corp., USA
SO U.S. Pat. Appl. Publ., 19 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM G03C001-76
INCL 430270100; X43-028.11
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|----------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | US 20050112494 | A1 | 20050526 | US 2003-721883 | 20031126 |

10551130

US 7030201 B2 20060418
 WO 2005052016 A2 20050609 WO 2004-IB4412 20041113
 WO 2005052016 A3 20060323
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
 SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG
 EP 1692094 A2 20060823 EP 2004-816624 20041113
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
 HR, IS, YU
 PRAI US 2003-721883 A 20031126
 WO 2004-IB4412 W 20041113

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|----------------|-------|---|
| US 20050112494 | ICM | G03C001-76 |
| | INCL | 430270100; X43-028.11 |
| | IPCI | C08F0126-06 [I,A]; C08F0126-00 [I,C*]; C08F0226-06 [I,A]; C08F0226-00 [I,C*]; C08F0122-40 [I,A]; C08F0122-00 [I,C*]; C08F0004-44 [I,A]; C08F0004-00 [I,C*]; C07C0321-00 [I,A] |
| | IPCR | C07C0231-00 [I,C*]; C07C0231-08 [I,A]; C07D0207-00 [I,C*]; C07D0207-404 [I,A]; C08F0008-00 [I,C*]; C08F0008-30 [I,A]; C08F0220-00 [I,C*]; C08F0220-36 [I,A]; C08F0220-58 [I,A]; C09D0133-14 [I,C*]; C09D0133-14 [I,A]; C09D0133-24 [I,C*]; C09D0133-24 [I,A]; G03F0007-09 [I,C*]; G03F0007-09 [I,A]; C08F0126-00 [I,C]; C08F0126-06 [I,A]; C07C0321-00 [I,C]; C07C0321-00 [I,A]; C08F0004-00 [I,C]; C08F0004-44 [I,A]; C08F0122-00 [I,C]; C08F0122-40 [I,A]; C08F0226-00 [I,C]; C08F0226-06 [I,A] |
| | NCL | 430/270.100; 430/281.100; 526/260.000; 525/123.000; 525/326.700; 525/326.800; 525/327.100; 525/328.200; 526/262.000; 526/304.000; 540/525.000; 544/175.000; 546/142.000; 546/183.000; 546/237.000; 546/296.000; 548/479.000; 548/547.000; 564/158.000; 564/159.000; 564/162.000 |
| | ECLA | C07D207/404; C08F008/30+20/32; G03F007/09A |
| WO 2005052016 | IPCI | C08F0220-32 [ICM,7]; C08F0220-00 [ICM,7,C*]; C08F0008-46 [ICS,7]; C09D0133-14 [ICS,7]; C08F0008-00 [ICS,7]; C08F0020-36 [ICS,7]; C07C0231-08 [ICS,7]; C07C0231-00 [ICS,7,C*]; C07D0207-404 [ICS,7]; C07D0207-00 [ICS,7,C*]; C08F0008-30 [ICS,7]; C08F0020-32 [ICS,7]; C08F0020-58 [ICS,7]; C08F0020-00 [ICS,7,C*]; C09D0133-24 [ICS,7]; G03F0007-09 [ICS,7] |
| | IPCR | C07C0231-00 [I,C*]; C07D0207-00 [I,C*]; C08F0008-00 [I,C*]; C08F0220-00 [I,C*]; C09D0133-14 [I,C*]; |

C09D0133-24 [I,C*]; G03F0007-09 [I,C*]; C07C0231-08
 [I,A]; C07D0207-404 [I,A]; C08F0008-30 [I,A];
 C08F0220-36 [I,A]; C08F0220-58 [I,A]; C09D0133-14
 [I,A]; C09D0133-24 [I,A]; G03F0007-09 [I,A]
 EP 1692094 ECLA C07D207/404; C08F008/30+20/32; G03F007/09A
 IPCI C07C0231-08 [ICM,7]; C07C0231-00 [ICM,7,C*];
 C08F0220-58 [ICS,7]; C07D0207-404 [ICS,7]; C07D0207-00
 [ICS,7,C*]; C09D0133-14 [ICS,7]; C08F0008-30 [ICS,7];
 C08F0008-00 [ICS,7,C*]; C09D0133-24 [ICS,7];
 C08F0220-36 [ICS,7]; C08F0220-00 [ICS,7,C*];
 G03F0007-09 [ICS,7]
 ECLA C07D207/404; C08F008/30+20/32; G03F007/09A
 ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
 OS MARPAT 142:490400
 AB The present invention relates to bottom antireflective coating compns.
 and
 polymers useful in making such compns.
 ST bottom antireflective coating photoresist photolithog
 IT Antireflective films
 Photolithography
 Photoresists
 (bottom antireflective coatings)
 IT 25167-42-4DP, Glycidyl methacrylate-styrene copolymer, Succinimide adduct
 86249-19-6DP, Benzyl methacrylate-Glycidyl methacrylate copolymer,
 Succinimide adduct 851883-55-1P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (bottom antireflective coatings containing)
 IT 79-06-1, Acrylamide, reactions 108-24-7, Acetic anhydride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of polymer for bottom antireflective coatings)
 IT 1432-45-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of polymer for bottom antireflective coatings)
 RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE CITED REFERENCES
 (1) Anon; EP 0922715 A2 1999 CAPLUS
 (2) Anon; English language abstract of JP37009212
 (3) Anon; International Search Report for PCT IB2004004412
 (4) Anon; Notification of Transmittal of International Search Report and the
 Written Opinion of the International Searching Authority for
 PCT/IB2004/004412for PCT/IB2004/004412for PCT/IB2004/004412
 (5) Anon; Written Opinion of the International Search Authority for PCT
 IB2004004412
 (6) Arase; US 20020156148 A1 2002 CAPLUS
 (7) Baumann; US 4079041 A 1978 CAPLUS
 (8) Lele; US 6369249 B1 2002 CAPLUS
 (9) Meador; US 5919599 A 1999 CAPLUS
 (10) Meador; US 6156479 A 2000 CAPLUS
 (11) Muller; US 4532332 A 1985 CAPLUS
 (12) Okazaki; US 6730763 B1 2004 CAPLUS
 (13) Puligadda; US 20030004283 A1 2003 CAPLUS
 (14) Simms; US 5424364 A 1995 CAPLUS
 (15) Zweifel; US 4247660 A 1981 CAPLUS

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L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:344412 CAPLUS

DN 142:393910

ED Entered STN: 21 Apr 2005

TI Thermosetting coating compositions with good transparency, heat, chemical,

and sputtering resistance, adhesion, and smoothness

IN Fukumura, Takanori; Sato, Hiroyuki; Itami, Setsuo; Watanabe, Eiji

PA Chisso Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G059-46

ICS G02B005-20; G02F001-1335

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2005105264 | A | 20050421 | JP 2004-261841 | 20040909 |
| PRAI | JP 2003-317373 | A | 20030909 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2005105264 | ICM | C08G059-46 |
| | ICS | G02B005-20; G02F001-1335 |
| | IPCI | C08G0059-46 [ICM,7]; C08G0059-00 [ICM,7,C*]; G02B0005-20 [ICS,7]; G02F0001-1335 [ICS,7]; |
| G02F0001-13 | | [ICS,7,C*] |
| | IPCR | C08G0059-00 [I,C*]; C08G0059-46 [I,A]; G02B0005-20 [I,A]; G02B0005-20 [I,C*]; G02F0001-13 [I,C*]; G02F0001-1335 [I,A] |
| | FTERM | 2H048/BA02; 2H048/BA55; 2H048/BA62; 2H048/BB02; 2H048/BB37; 2H048/BB42; 2H048/BB46; 2H091/FA02; 2H091/FB03; 2H091/GA01; 2H091/GA03; 2H091/GA07; 2H091/GA13; 2H091/LA04; 2H091/LA06; 2H091/LA12; 4J036/AD08; 4J036/AD11; 4J036/AG00; 4J036/AJ09; 4J036/AK11; 4J036/DB15; 4J036/DB17; 4J036/DB22; 4J036/FB14; 4J036/JA15 |

AB Title compns. comprise (A) polyesteramide resins obtained from tetracarboxylic dianhydrides, diamines, and polyhydroxy compds. 100, epoxy

resins 20-400, epoxy curing agents 15-60 parts (based on 100 parts epoxy resin). Thus, 3,3'-diaminodiphenyl sulfone 9.93, 1,4-butanediol 14.42, and 3,3',4,4'-diphenyl ether tetracarboxylic anhydride 62.04 g were polymerized to give 30%-solid polyester-polyamide solution with viscosity 36.5

mPa-s and weight average mol. weight 7600, 100 g of which was mixed with a Me

methacrylate-glycidyl methacrylate copolymer 30, trimellitic anhydride 6, 3-glycidoxypropyltrimethoxysilane 3, and Byk 344 (surfactant) 0.69 g, applied on a substrate, dried at 80° for 3 min, and heated at

- 220° for 30 min to give a test piece with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness.
- ST thermosetting coating transparency heat chem sputtering resistance adhesion smoothness; diaminodiphenyl sulfone butanediol diphenyl ether tetracarboxylic anhydride copolymer prepn; polyesteramide methyl glycidyl methacrylate trimellitic anhydride copolymer compn
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic, blend with polyester-polyamides; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)
- IT Epoxy resins, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (alicyclic, blend with polyester-polyamides; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)
- IT Polysiloxanes, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (amino-containing, reaction products with polyester-polyamides; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)
- and sputtering resistance, adhesion, and smoothness)
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anhydride-cured, blend with polyester-polyamides; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)
- IT Coating materials
 (chemical- and heat-resistant; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)
- IT Transparent materials
 (coatings; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)
- IT Polyesters, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (polyamide-, blend with epoxy resins; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)
- IT Polysulfones, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyamide-polyester-, blend with acrylic epoxy resins; thermosetting resin compns. with good transparency, heat, chemical, and sputtering

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resistance, adhesion, and smoothness)

IT Polyesters, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polysulfone-, blend with acrylic epoxy resins;
thermosetting
resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

IT Polyamides, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyester-, blend with epoxy resins; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion,
and smoothness)

IT Polyamides, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polysulfone-, blend with acrylic epoxy resins;
thermosetting
resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

IT Alcohols, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(primary, reaction products with polyester-polyamides; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

IT Coating materials
(smooth-surfaced; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

IT Electroluminescent devices
Liquid crystal displays
Optical filters
Optical imaging sensors
(thermosetting resin compns. with good transparency, heat, chemical, and
sputtering resistance, adhesion, and smoothness)

IT Coating materials
(thermosetting; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

IT Coating materials
(transparent; thermosetting resin compns. with good transparency, heat,
chemical, and sputtering resistance, adhesion, and smoothness)

IT 100-51-6DP, Benzyl alcohol, reaction products with polyester-polyamides
106209-33-0DP, SMA 1000, reaction products with polyester-polyamides
849133-83-1DP, reaction products with styrene-maleic anhydride copolymers or benzyl alc. 849133-83-1P 849928-55-8P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(blend with acrylic epoxy resin; thermosetting resin compns. with good

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transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

IT 198699-40-0P 681435-08-5P 849928-56-9P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(blend with polyester-polyamide; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

IT 25067-05-4, Polyglycidyl methacrylate 25167-42-4, Glycidyl methacrylate-styrene copolymer 28472-86-8, Glycidyl methacrylate-2-hydroxyethyl methacrylate copolymer 86249-19-6, Benzyl methacrylate-glycidyl methacrylate copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(blend with polyester-polyamide; thermosetting resin compns. with good transparency, heat, chemical, and sputtering resistance, adhesion, and smoothness)

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
UPOS.G Date last citing reference entered STN: 01 May 2009
OS.G CAPLUS 2009:490511; 2009:490496

L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:33669 CAPLUS
DN 142:115119
ED Entered STN: 14 Jan 2005
TI Manufacture of polymers for radically curable polymer compositions for pattern formation
IN Kamata, Hirotooshi; Ota, Keisuke; Kai, Kazushi
PA Showa Denko K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08F008-14
ICS G03F007-038; C08F290-08
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 74

FAN.CNT 1

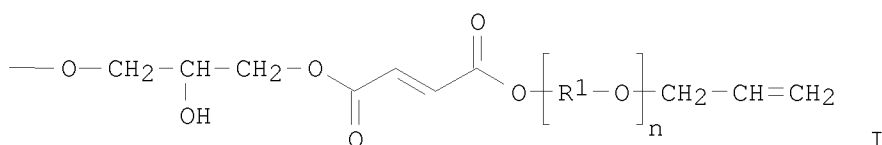
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2005008858 | A | 20050113 | JP 2004-104236 | 20040331 |
| PRAI | JP 2003-150798 | A | 20030528 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2005008858 | ICM | C08F008-14 |
| | ICS | G03F007-038; C08F290-08 |
| | IPCI | C08F0008-14 [ICM,7]; C08F0008-00 [ICM,7,C*]; G03F0007-038 [ICS,7]; C08F0290-08 [ICS,7]; C08F0290-00 [ICS,7,C*] |
| | IPCR | C08F0008-00 [I,C*]; C08F0008-14 [I,A]; C08F0290-00 [N,C*]; C08F0290-08 [N,A]; G03F0007-038 [I,A]; G03F0007-038 [I,C*] |
| | FTERM | 2H025/AB14; 2H025/AB15; 2H025/AB17; 2H025/AB20; |

2H025/AC01; 2H025/AD01; 2H025/BC32; 2H025/BC42;
 2H025/BC51; 2H025/BC53; 2H025/BC81; 2H025/BJ10;
 2H025/CA01; 2H025/CA18; 2H025/CA20; 2H025/CA27;
 2H025/CA28; 2H025/FA03; 2H025/FA17; 4J100/AB02Q;
 4J100/AB03Q; 4J100/AB07Q; 4J100/AE18P; 4J100/AG04Q;
 4J100/AL03Q; 4J100/AL04Q; 4J100/AL08P; 4J100/AL08Q;
 4J100/AL09Q; 4J100/AL10P; 4J100/AM02Q; 4J100/AM15Q;
 4J100/AM17Q; 4J100/AM19Q; 4J100/AQ06Q; 4J100/AQ08Q;
 4J100/BA02H; 4J100/BA03Q; 4J100/BA08H; 4J100/BA14Q;
 4J100/BA15H; 4J100/BA31Q; 4J100/BB17Q; 4J100/BB18Q;
 4J100/BC04Q; 4J100/BC08Q; 4J100/BC12Q; 4J100/BC43Q;
 4J100/BC53Q; 4J100/BC54P; 4J100/BC79Q; 4J100/CA04;
 4J100/CA31; 4J100/HA11; 4J100/HA61; 4J100/HA62;
 4J100/HC27; 4J100/HC34; 4J100/JA38; 4J127/AA01;
 4J127/AA02; 4J127/AA03; 4J127/BB041; 4J127/BB081;
 4J127/BB191; 4J127/BB221; 4J127/BB251; 4J127/BB301;
 4J127/BC031; 4J127/BD061; 4J127/BE11X; 4J127/BE111;
 4J127/BE27X; 4J127/BE271; 4J127/BE31X; 4J127/BE311;
 4J127/BE34Y; 4J127/BE341; 4J127/BE39X; 4J127/BE391;
 4J127/BG05X; 4J127/BG051; 4J127/BG10Y; 4J127/BG101;
 4J127/BG17Y; 4J127/BG171; 4J127/CB341; 4J127/FA17

GI



AB The polymers have I [R¹ = (cyclo)alkylene, aralkylene, arylene; n = 0-20] and optionally OCH₂CHOHCH₂OCOR₂:C (R₂ = H, Me) as side chains. Thus, addition reaction of glycidyl methacrylate-Me methacrylate copolymer with acrylic acid and monoallyloxyethyl fumarate in the presence of tetrabutylammonium bromide gave a curable polymer, which was mixed with trimethylolpropane triacrylate and Irgacure 907 (photopolymn. catalyst), applied on a glass plate, dried, irradiated with UV, and developed to

give

a pattern with high sensitivity.

ST acrylic polymer pattern formation curable; glycidyl methacrylate methyl polymer acrylate monoallyloxyethyl fumarate; tetrabutylammonium bromide catalyst addn polymer ester; trimethylolpropane triacrylate polymer pattern photocurable

IT Addition reaction catalysts

Photoimaging materials

(manufacture of polymers for radically curable polymer compns. for pattern formation)

IT Halides

Phosphines

Phosponium compounds

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Quaternary ammonium compounds, uses
RL: CAT (Catalyst use); USES (Uses)
(manufacture of polymers for radically curable polymer compns. for
pattern
formation)
IT Amines, uses
RL: CAT (Catalyst use); USES (Uses)
(tertiary; manufacture of polymers for radically curable polymer
compns. for
pattern formation)
IT 56-37-1, Benzyltriethylammonium chloride 56-93-9,
Benzyltrimethylammonium chloride 603-35-0, Triphenylphosphine, uses
1100-88-5, Benzyltriphenylphosphonium chloride 1530-32-1,
Ethyltriphenylphosphonium bromide 1643-19-2, Tetrabutylammonium bromide
2751-90-8, Tetraphenylphosphonium bromide
RL: CAT (Catalyst use); USES (Uses)
(manufacture of polymers for radically curable polymer compns. for
pattern
formation)
IT 820212-15-5P 820212-16-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of polymers for radically curable polymer compns. for
pattern
formation)
IT 820212-04-2P 820212-05-3P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT
(Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(manufacture of polymers for radically curable polymer compns. for
pattern
formation)
IT 26141-88-8P, Glycidyl methacrylate-methyl methacrylate copolymer
86249-19-6P, Benzyl methacrylate-glycidyl methacrylate copolymer
391675-16-4P, Monoallyloxyethyl fumarate
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
RACT
(Reactant or reagent)
(manufacture of polymers for radically curable polymer compns. for
pattern
formation)
IT 108-31-6, Maleic anhydride, reactions 111-45-5, Ethylene glycol
monoallyl ether
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of polymers for radically curable polymer compns. for
pattern
formation)

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:1059427 CAPLUS
DN 142:39564
ED Entered STN: 10 Dec 2004
TI Curable polymer compounds for photosensitive compositions with good
photosensitivity
IN Kamata, Hirotooshi; Ohta, Keisuke; Kai, Kazufumi
PA Showa Denko K.K., Japan
SO PCT Int. Appl., 58 pp.

10551130

CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C08L071-02
 ICS C08F020-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 35, 74

FAN.CNT 1

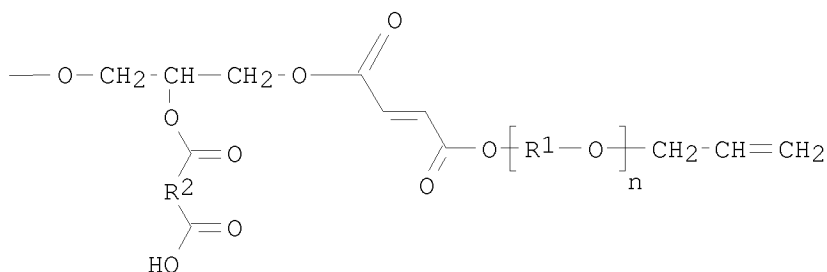
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|------------------|----------|
| PI | WO 2004106431 | A2 | 20041209 | WO 2004-JP7471 | 20040525 |
| | WO 2004106431 | A3 | 20050224 | | |
| | W: | | | | |
| | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: | | | | |
| | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | JP 2005008857 | A | 20050113 | JP 2004-102587 | 20040331 |
| | EP 1629046 | A2 | 20060301 | EP 2004-734763 | 20040525 |
| | EP 1629046 | B1 | 20080514 | | |
| | R: | | | | |
| | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| | CN 1795239 | A | 20060628 | CN 2004-80014628 | 20040525 |
| | CN 100343335 | C | 20071017 | | |
| | AT 395382 | T | 20080515 | AT 2004-734763 | 20040525 |
| | US 20070021571 | A1 | 20070125 | US 2005-557173 | 20051117 |
| | US 7569327 | B2 | 20090804 | | |
| PRAI | JP 2003-151215 | A | 20030528 | | |
| | US 2003-478344P | P | 20030616 | | |
| | WO 2004-JP7471 | W | 20040525 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| WO 2004106431 | ICM | C08L071-02 |
| | ICS | C08F020-00 |
| | IPCI | C08L0071-02 [ICM, 7]; C08L0071-00 [ICM, 7, C*]; C08F0020-00 [ICS, 7] |
| | IPCR | C08F0008-00 [I, C*]; C08F0008-00 [I, A]; C08F0008-14 [I, A]; C08F0008-46 [I, A]; C08F0283-00 [I, C*]; C08F0283-06 [I, A]; C08F0283-10 [I, A]; C08F0290-00 [I, C*]; C08F0290-04 [I, A]; C08F0290-06 [I, A]; C08F0290-14 [I, A]; C08G0059-00 [I, C*]; C08G0059-14 [I, A]; C08G0059-16 [I, A]; C08G0065-00 [I, C*]; C08G0065-332 [I, A]; G03F0007-033 [I, C*]; G03F0007-033 [I, A] |
| | ECLA | C08F008/14+220/32; C08F008/14+220/14; C08F008/14+220/18; C08F008/46+220/18; C08F008/46+220/14; C08F008/46+220/28; C08F283/06; C08F283/10; C08F290/04; C08F290/06; C08F290/14; |

C08G059/14K2D; C08G059/14K2D2; C08G059/14S;
 C08G065/332D; G03F007/033; G03F007/038S
 JP 2005008857 IPCI C08F0008-46 [ICM,7]; C08F0008-14 [ICS,7]; C08F0008-00
 [ICS,7,C*]; G03F0007-027 [ICS,7]; G03F0007-038 [ICS,7]
 IPCR C08F0008-00 [I,C*]; C08F0008-14 [I,A]; C08F0008-46
 [I,A]; G03F0007-027 [I,A]; G03F0007-027 [I,C*];
 G03F0007-038 [I,A]; G03F0007-038 [I,C*]
 FTERM 2H025/AA04; 2H025/AA09; 2H025/AA10; 2H025/AB13;
 2H025/AB15; 2H025/AC01; 2H025/AD01; 2H025/BC14;
 2H025/BC19; 2H025/BC74; 2H025/BC81; 2H025/BC85;
 2H025/BC86; 2H025/FA17; 4J100/AB02Q; 4J100/AB03Q;
 4J100/AB07Q; 4J100/AE18P; 4J100/AG04Q; 4J100/AL03Q;
 4J100/AL04Q; 4J100/AL08P; 4J100/AL08Q; 4J100/AL09Q;
 4J100/AL10P; 4J100/AM02Q; 4J100/AM15Q; 4J100/AM17Q;
 4J100/AM19Q; 4J100/AQ06Q; 4J100/AQ08Q; 4J100/BA02H;
 4J100/BA03Q; 4J100/BA08H; 4J100/BA14Q; 4J100/BA15H;
 4J100/BA16H; 4J100/BA31Q; 4J100/BB17Q; 4J100/BB18Q;
 4J100/BC04Q; 4J100/BC08Q; 4J100/BC12Q; 4J100/BC23H;
 4J100/BC43Q; 4J100/BC53Q; 4J100/BC54P; 4J100/BC79Q;
 4J100/CA04; 4J100/CA31; 4J100/HA11; 4J100/HA61;
 4J100/HA62; 4J100/HC27; 4J100/HC28; 4J100/HC29;
 4J100/HC30; 4J100/HC34; 4J100/JA38
 EP 1629046 IPCI C08L0071-00 [I,C]; C08L0071-02 [I,A]; C08F0020-00
 [I,C]; C08F0020-00 [I,A]
 IPCR C08L0071-00 [I,C]; C08L0071-02 [I,A]; C08F0020-00
 [I,C]; C08F0020-00 [I,A]
 CN 1795239 IPCI C08L0071-02 [I,A]; C08F0020-00 [I,A]; C08L0071-00
 [I,C]; C08L0071-02 [I,A]
 IPCR C08L0071-00 [I,C]; C08L0071-02 [I,A]; C08F0020-00
 [I,C]; C08F0020-00 [I,A]
 AT 395382 IPCI C08L0071-00 [I,C]; C08L0071-02 [I,A]; C08F0020-00
 [I,C]; C08F0020-00 [I,A]
 IPCR C08L0071-00 [I,C]; C08L0071-02 [I,A]; C08F0020-00
 [I,C]; C08F0020-00 [I,A]
 US 20070021571 IPCI C08F0008-00 [I,A]; C08L0071-02 [I,A]; C08L0071-00
 [I,C*]; C08F0020-00 [I,A]; G03F0007-038 [I,A]
 IPCR C08F0008-00 [I,C]; C08F0008-00 [I,A]; C08L0071-00
 [I,C]; C08L0071-02 [I,A]; C08F0008-14 [I,A];
 C08F0008-46 [I,A]; C08F0020-00 [I,C]; C08F0020-00
 [I,A]; C08F0283-00 [I,C*]; C08F0283-06 [I,A];
 C08F0283-10 [I,A]; C08F0290-00 [I,C*]; C08F0290-04
 [I,A]; C08F0290-06 [I,A]; C08F0290-14 [I,A];
 C08G0059-00 [I,C*]; C08G0059-14 [I,A]; C08G0059-16
 [I,A]; C08G0065-00 [I,C*]; C08G0065-332 [I,A];
 G03F0007-033 [I,C*]; G03F0007-033 [I,A]; G03F0007-038
 [I,C]; G03F0007-038 [I,A]
 NCL 525/386.000; 430/285.100; 430/007.000; 430/018.000;
 430/287.100; 430/311.000; 430/325.000; 522/100.000;
 522/142.000; 525/286.000; 525/301.000
 ECLA C08F008/14+220/32; C08F008/14+220/14;
 C08F008/14+220/18; C08F008/46+220/18;
 C08F008/46+220/14; C08F008/46+220/28; C08F283/06;
 C08F283/10; C08F290/04; C08F290/06; C08F290/14;
 C08G059/14K2D; C08G059/14K2D2; C08G059/14S;
 C08G065/332D; G03F007/033; G03F007/038S

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
GI



I

AB This invention relates to novel polymer compds. having a side chain I, and

a process for preparing the same and radical polymerizable curable compns.

using the same, wherein R1 = independently ≥ 1 organic residue selected from alkylene, branched alkylene, cycloalkylene, aralkylene, and arylene; R2 = independently ≥ 1 organic residue selected from alkylene, branched alkylene, alkenylene, branched alkenylene, cycloalkylene, cycloalkenylene,

and arylene; and n = 0-20 integer. Thus, glycidyl methacrylate 88.0, Me methacrylate 62.0, 2-mercaptoethanol 0.93, and propylene glycol monomethyl

ether acetate 350.0 g were heated at 90°, a solution containing glycidyl methacrylate 88.0, Me methacrylate 62.0, 2-mercaptoethanol 0.93, propylene

glycol monomethyl ether acetate 350.0, and AIBN 6.3 g was added therein and polymerized for 3 h to give a copolymer with weight average mol.

weight 14,000, 300

g of which was mixed with monoallyloxyethyl fumarate obtained from maleic anhydride and ethylene glycol monoallyl ether 38.0, acrylic acid 13.7, tetrabutylammonium bromide 3.0, and methoxyquinone 0.15 g, heated at 90° for 15 h, 44.0 g tetrahydrophthalic anhydride was added therein and heated at 45° to give a copolymer having a double bond with acid value 90 and weight average mol. weight 55,000, 100 parts of which (30%-solids)

was mixed with Light Acrylate TMP-A trimethylolpropane triacrylate 15, Irgacure 907 2.5, and 4,4'-bis(N,N-diethylamino)benzophenone 0.5 parts, applied on a glass substrate, dried, irradiated, and developed to give a test piece with good photosensitivity.

ST curable polymer compd photosensitive compn; branched alkyl contg acrylic polymer prepn

IT Acrylic polymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(branched; preparation of curable polymer compds. for photosensitive compns.)

IT Photoimaging materials

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Photoresists
(preparation of curable polymer compds. for photosensitive compns.)

IT 26141-88-8P, Glycidyl methacrylate-methyl methacrylate copolymer
86249-19-6P, Benzyl methacrylate-glycidyl methacrylate copolymer
391675-16-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT
(Reactant or reagent)
(intermediate in polymer acrylate preparation; preparation of curable polymer compds. for photosensitive compns.)

IT 79-10-7DP, Acrylic acid, reaction products with epoxy-containing acrylic polymers, carboxy-containing allyl compds., and tetrahydrophthalic anhydride,
polymers with triacrylates 85-43-8DP, Tetrahydrophthalic anhydride, reaction products with epoxy-containing acrylic polymers, acrylic acid, and
carboxy-containing allyl compds., polymers with triacrylates
15625-89-5DP,
Light Acrylate TMP-A, polymers with allyl-containing branched acrylic polymers
26141-88-8DP, Glycidyl methacrylate-methyl methacrylate copolymer, reaction products with acrylic acid, carboxy-containing allyl compds.,
and
tetrahydrophthalic anhydride, polymers with triacrylates
86249-19-6DP, Benzyl methacrylate-glycidyl methacrylate copolymer, reaction products with acrylic acid, carboxy-containing allyl compds.,
and
tetrahydrophthalic anhydride, polymers with triacrylates 391675-16-4DP, reaction products with epoxy-containing acrylic polymers, acrylic acid,
and
tetrahydrophthalic anhydride, polymers with triacrylates
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of curable polymer compds. for photosensitive compns.)

IT 108-31-6, Maleic anhydride, reactions 111-45-5, Ethylene glycol monoallyl ether
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant in monomer preparation; preparation of curable polymer compds. for photosensitive compns.)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE CITED REFERENCES
(1) Anon; WO 03010124 A1 CAPLUS

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:872885 CAPLUS
DN 141:372751
ED Entered STN: 21 Oct 2004
TI Composition for formation of underlayer film for lithography containing epoxy compound and carboxylic acid compound
IN Kishioka, Takahiro
PA Nissan Chemical Industries, Ltd., Japan
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2

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DT Patent
 LA Japanese
 IC ICM G03F007-11
 ICS C08G059-40; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 76

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|------------------|----------|
| PI | WO 2004090640 | A1 | 20041021 | WO 2004-JP4764 | 20040401 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | EP 1617289 | A1 | 20060118 | EP 2004-725145 | 20040401 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, | | | | |
| HR | CN 1768306 | A | 20060503 | CN 2004-80009217 | 20040401 |
| | CN 101550265 | A | 20091007 | CN 2009-10134350 | 20040401 |
| | CN 101560323 | A | 20091021 | CN 2009-10134351 | 20040401 |
| | US 20060234156 | A1 | 20061019 | US 2005-551130 | 20050929 |
| PRAI | JP 2003-99228 | A | 20030402 | | |
| | CN 2004-80009217 | A3 | 20040401 | | |
| | WO 2004-JP4764 | W | 20040401 | | |

CLASS

| | PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|--|---------------|-------|---|
| | WO 2004090640 | ICM | G03F007-11 |
| | | ICS | C08G059-40; H01L021-027 |
| | | IPCI | G03F0007-11 [ICM,7]; C08G0059-40 [ICS,7]; C08G0059-00 [ICS,7,C*]; H01L0021-027 [ICS,7]; H01L0021-02 [ICS,7,C*] |
| | | IPCR | C08G0059-00 [I,C*]; C08G0059-40 [I,A]; G03F0007-09 [I,C*]; G03F0007-09 [I,A]; G03F0007-11 [I,C*]; G03F0007-11 [I,A] |
| | EP 1617289 | ECLA | C08G059/40; G03F007/09A; G03F007/11 |
| | | IPCI | G03F0007-11 [ICM,7]; C08G0059-40 [ICS,7]; C08G0059-00 [ICS,7,C*]; H01L0021-027 [ICS,7]; H01L0021-02 [ICS,7,C*] |
| | | IPCR | C08G0059-00 [I,C*]; C08G0059-40 [I,A]; G03F0007-09 [I,C*]; G03F0007-09 [I,A]; G03F0007-11 [I,C*]; G03F0007-11 [I,A] |
| | CN 1768306 | ECLA | C08G059/40; G03F007/09A; G03F007/11 |
| | | IPCI | G03F0007-11 [I,A]; C08G0059-40 [I,A]; C08G0059-00 [I,C*]; H01L0021-027 [I,A]; H01L0021-02 [I,C*] |
| | | IPCR | G03F0007-11 [I,C]; G03F0007-11 [I,A]; C08G0059-00 |

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[I,C]; C08G0059-40 [I,A]; G03F0007-09 [I,C*];
G03F0007-09 [I,A]; H01L0021-02 [I,C]; H01L0021-027
[I,A]
CN 101550265 ECLA C08G059/40; G03F007/09A; G03F007/11
IPCI C08L0063-00 [I,A]; G03F0007-11 [I,A]; H01L0021-027
[I,A]; H01L0021-02 [I,C*]
CN 101560323 IPCI C08L0063-00 [I,A]; C08L0101-06 [I,A]; C08L0101-00
[I,C*]; C08G0059-40 [I,A]; C08G0059-00 [I,C*];
G03F0007-11 [I,A]; H01L0021-027 [I,A]; H01L0021-02
[I,C*]
US 20060234156 IPCI G03C0001-00 [I,A]
IPCR G03C0001-00 [I,C]; G03C0001-00 [I,A]; C08G0059-00
[I,C*]; C08G0059-40 [I,A]; G03F0007-09 [I,C*];
G03F0007-09 [I,A]; G03F0007-11 [I,C*]; G03F0007-11
[I,A]
NCL 430/270.100; 430/271.100; 430/311.000; 430/330.000
ECLA C08G059/40; G03F007/09A; G03F007/11
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB A composition for formation of underlayer film for lithog. that is used
in the
lithog. process for producing semiconductor devices; and an underlayer
film exhibiting a dry etching rate greater than in the use of
photoresists. In particular, a composition for formation of underlayer
film,
capable of forming an underlayer film without the need to use a
crosslinking reaction catalyzed by a strong acid, which composition
comprises a
component having epoxy group (polymeric compound or compound) and a
component
having phenolic hydroxyl group, carboxyl group, protected carboxyl group
or acid anhydride structure (polymeric compound or compound).
ST antireflection compn underlayer film photolithog photoresist epoxy
carboxylic acid
IT Antireflective films
Photolithography
Photoresists
Semiconductor device fabrication
(composition for formation of underlayer film for lithog. containing
epoxy
compound and carboxylic acid compound)
IT 25067-05-4P, Glycidyl methacrylate homopolymer 86249-19-6P,
Benzyl methacrylate-glycidyl methacrylate copolymer 155161-74-3P,
Benzyl
methacrylate-glycidyl methacrylate-methacrylic acid copolymer
156623-56-2P, Benzyl methacrylate-glycidyl methacrylate-2-hydroxyethyl
methacrylate copolymer
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(composition for formation of underlayer film for lithog. containing
epoxy
compound and carboxylic acid compound)
IT 2451-62-9, Tris(2,3-epoxypropyl)isocyanurate 2904-41-8,
Tris(2-carboxyethyl)isocyanurate 9003-01-4, Poly(acrylic acid)
RL: TEM (Technical or engineered material use); USES (Uses)
(composition for formation of underlayer film for lithog. containing
epoxy

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compound and carboxylic acid compound)
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
UPOS.G Date last citing reference entered STN: 16 Feb 2009
OS.G CAPLUS 2006:734505

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- (1) Arch Specialty Chemicals Inc; EP 1169357 A 2002 CAPLUS
- (2) Arch Specialty Chemicals Inc; JP 2002539282 A 2002
- (3) Arch Specialty Chemicals Inc; US 6492092 B1 2002 CAPLUS
- (4) Clariant International Ltd; EP 1131678 A 2002 CAPLUS
- (5) Clariant International Ltd; CN 1330779 T 2002 CAPLUS
- (6) Clariant International Ltd; JP 2002530696 A 2002
- (7) Clariant International Ltd; US 6114085 A1 2002 CAPLUS
- (8) Fuji Photo Film Co Ltd; JP 10-120939 A 1998 CAPLUS
- (9) Fuji Photo Film Co Ltd; JP 10-333336 A 1998 CAPLUS
- (10) Hyundai Electronics Ind Co Ltd; CN 1300790 A 2001 CAPLUS
- (11) Hyundai Electronics Ind Co Ltd; JP 2001194799 A 2001 CAPLUS
- (12) Hyundai Electronics Ind Co Ltd; US 20020009595 A1 2001
- (13) Hyundai Electronics Ind Co Ltd; GB 2357512 A 2001 CAPLUS
- (14) Hyundai Electronics Ind Co Ltd; FR 2802934 A 2001 CAPLUS
- (15) Hyundai Electronics Industries Co Ltd; DE 10028345 A 2001 CAPLUS
- (16) Hyundai Electronics Industries Co Ltd; CN 1278529 A 2001 CAPLUS
- (17) Hyundai Electronics Industries Co Ltd; JP 200149231 A 2001
- (18) Hyundai Electronics Industries Co Ltd; GB 2351288 A 2001 CAPLUS
- (19) Hyundai Electronics Industries Co Ltd; FR 2795411 A 2001 CAPLUS
- (20) Hyundai Electronics Industries Co Ltd; US 6388039 B1 2001 CAPLUS
- (21) Japan Synthetic Rubber Co Ltd; JP 06-118656 A 1994 CAPLUS
- (22) Kabushiki Kaisha Hainikkusu Semiconductor; DE 10133716 A1 2002 CAPLUS
- (23) Kabushiki Kaisha Hainikkusu Semiconductor; DE 10133717 A1 2002 CAPLUS
- (24) Kabushiki Kaisha Hainikkusu Semiconductor; CN 1331254 A 2002 CAPLUS
- (25) Kabushiki Kaisha Hainikkusu Semiconductor; CN 1331256 A 2002 CAPLUS
- (26) Kabushiki Kaisha Hainikkusu Semiconductor; US 20020093069 A1 2002
- (27) Kabushiki Kaisha Hainikkusu Semiconductor; US 20020127789 A1 2002 CAPLUS
- (28) Kabushiki Kaisha Hainikkusu Semiconductor; JP 2002105137 A 2002 CAPLUS
- (29) Kabushiki Kaisha Hainikkusu Semiconductor; KR 20022907 A 2002
- (30) Kabushiki Kaisha Hainikkusu Semiconductor; KR 20022909 A 2002
- (31) Kabushiki Kaisha Hainikkusu Semiconductor; JP 200297231 A 2002
- (32) Kabushiki Kaisha Hainikkusu Semiconductor; GB 2364315 A 2002 CAPLUS
- (33) Kabushiki Kaisha Hainikkusu Semiconductor; GB 2364317 A 2002 CAPLUS
- (34) Tokyo Ohka Kogyo Co Ltd; JP 06-35201 A 1994 CAPLUS

L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:178255 CAPLUS

DN 140:219431

ED Entered STN: 04 Mar 2004

TI Epoxy resin compositions, solutions, and their films for protective films
of color filters of liquid-crystal displays

IN Murata, Yasutake; Sasaki, Takeaki; Fujishiro, Koichi

PA Nippon Steel Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B005-20

ICS C08G059-24

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CC 42-9 (Coatings, Inks, and Related Products)

Section cross-reference(s): 73, 74

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2004069930 | A | 20040304 | JP 2002-227755 | 20020805 |
| PRAI | JP 2002-227755 | | 20020805 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2004069930 | ICM | G02B005-20 |
| | ICS | C08G059-24 |
| | IPCI | G02B0005-20 [ICM, 7]; C08G0059-24 [ICS, 7]; C08G0059-00 [ICS, 7, C*] |
| | IPCR | C08G0059-00 [I, C*]; C08G0059-24 [I, A]; G02B0005-20 [I, A]; G02B0005-20 [I, C*] |
| | FTERM | 2H048/BB37; 2H048/BB42; 4J036/AA04; 4J036/AB02; 4J036/AD04; 4J036/AD12; 4J036/AE07; 4J036/AJ09; 4J036/AJ13; 4J036/AK11; 4J036/CA21; 4J036/DB15; 4J036/DB22; 4J036/DB23; 4J036/JA01 |

AB Title compns. comprise (A) epoxy resins containing (a) epoxy-containing acrylic

copolymers with mol. weight 25,000-100,000 and epoxy equivalent 200-400 g/equiv

20-45, (b) fluorene-containing epoxy resins G[OAOCH₂CH(OH)CH₂]_nOAOG (G = glycidyl; A = fluorene derivative; n = 0-20) 15-40, (c) alicyclic epoxy resins

having ≥2 epoxy groups 10-35, and (d) aliphatic epoxy resins 5-35%.

Thus, a composition containing benzyl methacrylate-glycidyl methacrylate copolymer,

ESF 300 (fluorene-type epoxy resin), Celloxide 2021P (alicyclic epoxy resin), ZX 1542 (trimethylolpropane triglycidyl ether), trimellitic anhydride, and SK 1 (blocked carboxylic acid) showed good storage stability and gave a heat-resistant coating with good surface smoothness.

ST fluorene acrylic epoxy coating color filter; heat resistance epoxy coating

color filter; liq crystal display epoxy resin coating; storage stability fluorene acrylic epoxy coating

IT Epoxy resins, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-, cardo; epoxy resin compns. for heat-resistant protective films of color filters of LCD)

IT Cardo polymers

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-epoxy-; epoxy resin compns. for heat-resistant protective films of color filters of LCD)

IT Liquid crystal displays

Optical filters

(epoxy resin compns. for heat-resistant protective films of color filters of LCD)

IT Coating materials

(heat-resistant; epoxy resin compns. for heat-resistant protective films of color filters of LCD)

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IT 42765-17-3, Trimethylolpropane triglycidyl ether homopolymer
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(ZX 1542; epoxy resin compns. for heat-resistant protective films of color filters of LCD)

IT 666263-69-0P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy resin compns. for heat-resistant protective films of color filters of LCD)

IT 25085-98-7, Celloxide 2021P 31256-79-8, ESF 300 86249-19-6, Benzyl methacrylate-glycidyl methacrylate copolymer
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(epoxy resin compns. for heat-resistant protective films of color filters of LCD)

IT 552-30-7, Trimellitic anhydride 593-29-3, Nonsoul SK 1
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(epoxy resin compns. for heat-resistant protective films of color filters of LCD)

L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2000:855677 CAPLUS

DN 134:23519

ED Entered STN: 07 Dec 2000

TI Thermosetting anti-reflective coatings

IN Meador, Jim D.; Nowak, Kelly A.; Xu, Gu

PA Brewer Science, Inc., USA

SO U.S., 11 pp., Cont.-in-part of U.S. 5,919,599.

CODEN: USXXAM

DT Patent

LA English

IC ICM G03F007-004

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 73

FAN.CNT 3

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|------------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | US 6156479 | A | 20001205 | US 1999-273881 | 19990322 |
| | US 5919599 | A | 19990706 | US 1997-940169 | 19970930 |
| | CN 100362428 | C | 20080116 | CN 1998-809390 | 19980928 |
| | TW 483917 | B | 20020421 | TW 1998-87116151 | 19980929 |
| | TW 477796 | B | 20020301 | TW 2000-89101156 | 20000125 |
| | WO 2000057247 | A1 | 20000928 | WO 2000-US7463 | 20000321 |
| | W: CA, CN, JP, KR, SG | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| PRAI | US 1997-940169 | A2 | 19970930 | | |
| | US 1999-273881 | A | 19990322 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
| ----- | ----- | ----- |

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|---------------|------|--|
| US 6156479 | ICM | G03F007-004 |
| | INCL | 430270100 |
| | IPCI | G03F0007-004 [ICM,7] |
| | IPCR | G03F0007-11 [I,C*]; G03F0007-11 [I,A]; C08F0008-00 [I,C*]; C08F0008-00 [I,A]; C08F0220-00 [I,C*]; C08F0220-32 [I,A]; C08F0283-00 [I,C*]; C08F0283-10 [I,A]; C09D0133-06 [I,C*]; C09D0133-06 [I,A]; G03F0007-09 [I,C*]; G03F0007-09 [I,A] |
| | NCL | 430/270.100; 430/271.100 |
| | ECLA | C08F008/00+20/00; C08F283/10; C09D133/06B+B4+C; G03F007/09A |
| US 5919599 | IPCI | G03C0001-492 [ICM,6]; G03C0001-005 [ICM,6,C*]; C08K0063-00 [ICS,6]; C08F0283-10 [ICS,6]; C08F0283-00 [ICS,6,C*] |
| | IPCR | G03F0007-11 [I,C*]; G03F0007-11 [I,A]; C08F0008-00 [I,C*]; C08F0008-00 [I,A]; C08F0220-00 [I,C*]; C08F0220-32 [I,A]; C08F0283-00 [I,C*]; C08F0283-10 [I,A]; C09D0133-06 [I,C*]; C09D0133-06 [I,A]; G03F0007-09 [I,C*]; G03F0007-09 [I,A] |
| | NCL | 430/271.100; 430/270.100; 430/512.000; 523/436.000; 525/523.000; 525/533.000 |
| | ECLA | C08F008/00+20/00; C08F283/10; C09D133/06B+B4+C; G03F007/09A |
| CN 100362428 | IPCI | G03C0001-005 [I,C]; G03C0001-492 [I,A]; G03C0001-815 [I,C]; G03C0001-815 [I,A] |
| | IPCR | G03C0001-005 [I,C]; G03C0001-492 [I,A]; G03F0007-11 [I,C*]; G03F0007-11 [I,A]; C08F0008-00 [I,C*]; C08F0008-00 [I,A]; C08F0220-00 [I,C*]; C08F0220-32 [I,A]; C08F0283-00 [I,C*]; C08F0283-10 [I,A]; C09D0133-06 [I,C*]; C09D0133-06 [I,A]; G03C0001-815 [I,C]; G03C0001-815 [I,A]; G03F0007-09 [I,C*]; G03F0007-09 [I,A] |
| | ECLA | C08F008/00+20/00; C08F283/10; C09D133/06B+B4+C; G03F007/09A |
| TW 483917 | IPCI | C08L0033-08 [ICM,7]; C08L0033-00 [ICM,7,C*] |
| | IPCR | G03F0007-11 [I,C*]; G03F0007-11 [I,A]; C08F0008-00 [I,C*]; C08F0008-00 [I,A]; C08F0220-00 [I,C*]; C08F0220-32 [I,A]; C08F0283-00 [I,C*]; C08F0283-10 [I,A]; C09D0133-06 [I,C*]; C09D0133-06 [I,A]; G03F0007-09 [I,C*]; G03F0007-09 [I,A] |
| | ECLA | C08F008/00+20/00; C08F283/10; C09D133/06B+B4+C; G03F007/09A |
| TW 477796 | IPCI | C08F0283-10 [ICM,7]; C08F0283-00 [ICM,7,C*] |
| | IPCR | C08F0283-00 [I,C*]; C08F0283-10 [I,A] |
| | ECLA | C08F283/10 |
| WO 2000057247 | IPCI | G03C0001-492 [ICM,7]; G03C0001-005 [ICM,7,C*]; C08K0063-00 [ICS,7]; C08F0283-10 [ICS,7]; C08F0283-00 [ICS,7,C*] |
| | IPCR | C08F0283-00 [I,C*]; C08F0283-10 [I,A] |
| | ECLA | C08F283/10 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Anti-reflective coating compns. having improved etch rate, inter alia, are

prepared from certain acrylic polymers and copolymers, such as, glycidyl methacrylate reacted with non-polycyclic carboxylic acid dyes and

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non-polycyclic phenolic dyes, all light absorbing at a wavelength of 193 nm.

ST thermosetting antireflective coating photoresist acrylic polymer

IT Photoresists
(dye-attached acrylic polymer thermosetting anti-reflective coatings for)

IT Antireflective films
(thermosetting anti-reflective coatings from dye-attached acrylic polymers)

IT 62-23-7DP, 4-Nitrobenzoic acid, reaction products with poly(glycidyl methacrylate) 65-85-0DP, Benzoic acid, reaction products with poly(glycidyl methacrylate), preparation 99-34-3DP, 3,5-Dinitrobenzoic acid, reaction products with poly(glycidyl methacrylate) 108-95-2DP, Phenol, reaction products with poly(glycidyl methacrylate), preparation 140-10-3DP, trans-Cinnamic acid, reaction products with poly(glycidyl methacrylate) 527-72-0DP, 2-Thiophenecarboxylic acid, reaction products with poly(glycidyl methacrylate) 610-30-0DP, 2,4-Dinitrobenzoic acid, reaction products with poly(glycidyl methacrylate) 3724-65-0DP,

Crotonic acid, reaction products with poly(glycidyl methacrylate) 16533-71-4DP, 3,5-Dinitro-p-toluic acid, reaction products with glycidyl methacrylate-2-hydroxy-3-phenoxypropyl acrylate copolymer 16533-71-4DP, 3,5-Dinitro-p-toluic acid, reaction products with poly(glycidyl methacrylate) 25067-05-4DP, Poly(glycidyl methacrylate), reaction products with benzoic acid 86249-19-6DP, Benzyl methacrylate-glycidyl methacrylate copolymer, reaction products with 2,4-dinitrobenzoic acid 297748-18-6DP, Glycidyl methacrylate-2-hydroxy-3-phenoxypropyl acrylate copolymer, reaction products with 3,5-dinitro-p-toluic acid

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thermosetting anti-reflective coatings from dye-attached acrylic polymers)

OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (19 CITINGS)

UPOS.G Date last citing reference entered STN: 03 Jul 2009

OS.G CAPLUS 2007:484898; 2006:982616; 2005:450794; 2004:1080605; 2004:312306; 2004:252079; 2004:100632; 2003:1007488; 2003:532225; 2002:960608; 2002:814036; 2002:730510; 2002:368926; 2002:309856; 2002:241110; 2001:417272; 2000:806411

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE CITED REFERENCES

(1) Dexter; US 4544691 1985 CAPLUS

(2) Dichiara; US 5482817 1996 CAPLUS

(3) Flaim; US 5693691 1997 CAPLUS

(4) Knors; US 5731385 1998 CAPLUS

L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1999:606042 CAPLUS

DN 132:195349

ED Entered STN: 24 Sep 1999

TI Molecular dynamics simulations of polymer-membrane/solvent interfaces

AU Schepers, Claudia; Hofmann, Dieter; Paul, Dieter

CS GKSS Research Center, Institute of Chemistry, Teltow, D - 14513, Germany

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SO Scientific Computing in Chemical Engineering II: Computational Fluid Dynamics, Reaction Engineering, and Molecular Properties (1999), 134-142. Editor(s): Keil, Frerich. Publisher: Springer, Berlin, Germany. CODEN: 68ELAF

DT Conference

LA English

CC 38-2 (Plastics Fabrication and Uses)

AB Latest results from mol. dynamics simulations on pervaporation in the interfacial region between polymer and feed are reported. A binary organic mixture containing 80 % n-heptane and 20 % poly(Me Ph siloxane) (PMPHS) and selected poly(methacrylates) containing 6-membered rings, e.g., benzyl-, cyclohexylmethyl- (PcHMA), a-naphthylmethyl-, 9-anthrylmethyl-, and 2,4,6-tri-tert-Bu-benzyl esters of methacrylic acid were studied. While a solubility related enrichment factor of 2 for the benzene component was observed for PMPHS, all studied methacrylates sorbed preferentially the major component n-heptane. Although there was a fast diffusion observed in the case of PMPHS the selectivity is low in comparison to the PcHMA containing polymer membrane.

ST mol dynamics simulation polymethacrylate membrane solvent interface

IT Diffusion
Membranes, nonbiological
Molecular dynamics
Pervaporation
(mol. dynamics simulations of polymer-membrane/solvent interfaces)

IT Polymers, uses
Polysiloxanes, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(mol. dynamics simulations of polymer-membrane/solvent interfaces)

IT 9005-12-3, Poly[oxy(methylphenylsilylene)] 29320-20-5 31230-04-3
51960-29-3, Poly(9-anthrylmethyl methacrylate) 86249-19-6
259794-99-5 259795-01-2
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(mol. dynamics simulations of polymer-membrane/solvent interfaces)

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

UPOS.G Date last citing reference entered STN: 16 Feb 2009

OS.G CAPLUS 2000:578873

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE CITED REFERENCES

- (1) Fritz, L; Polymer 1997, V38, P1035 CAPLUS
- (2) Fritz, L; Polymer 1998, V39, P2531 CAPLUS
- (3) Hofmann, D; J Membr Sci 1998, V144, P145 CAPLUS
- (4) MSI; Discover Simulation Tools, Release 96.0 and 4.0.0, User Guide, www.msi.com/doc/ 1996
- (5) Marrink, S; J Phys Chem 1996, V100, P16729 CAPLUS
- (6) Mulder, M; Polymeric Gas Separation Membranes 1991
- (7) Theodorou, D; Macromolecules 1986, V10, P139

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN

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AN 1997:515447 CAPLUS
DN 127:123091
OREF 127:23727a,23730a
ED Entered STN: 14 Aug 1997
TI Polymeric dispersants, pigment dispersions and offset printing ink compositions
IN Iwase, Koji; Kinoshita, Hideki; Sato, Teruhisa; Ishikawa, Hiroyuki
PA Sakata Inx Corporation, Japan
SO Eur. Pat. Appl., 32 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C09D017-00
ICS C09D011-02
CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 37

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-------------------|------|----------|-----------------|----------|
| PI | EP 781820 | A2 | 19970702 | EP 1996-120596 | 19961220 |
| | EP 781820 | A3 | 19980107 | | |
| | EP 781820 | B1 | 19990908 | | |
| | R: DE, ES, FR, GB | | | | |
| | JP 09302259 | A | 19971125 | JP 1996-243843 | 19960913 |
| | JP 3396585 | B2 | 20030414 | | |
| | ES 2135838 | T3 | 19991101 | ES 1996-120596 | 19961220 |
| | CA 2193763 | A1 | 19970626 | CA 1996-2193763 | 19961223 |
| | CA 2193763 | C | 20041123 | | |
| PRAI | JP 1995-337383 | A | 19951225 | | |
| | JP 1996-54944 | A | 19960312 | | |
| | JP 1996-243843 | A | 19960913 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|--|
| EP 781820 | ICM | C09D017-00 |
| | ICS | C09D011-02 |
| | IPCI | C09D0017-00 [ICM,6]; C09D0011-02 [ICS,6] |
| | IPCR | B01F0017-52 [I,C*]; B01F0017-52 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; C09B0067-00 [I,C*]; C09B0067-46 [I,A]; C09C0003-10 [I,C*]; C09C0003-10 [I,A]; C09D0011-00 [I,C*]; C09D0011-00 [I,A]; C09D0011-02 [I,C*]; C09D0011-02 [I,A]; C09D0011-10 [I,C*]; C09D0011-10 [I,A]; C09D0017-00 [I,C*]; C09D0017-00 [I,A]; C09D0161-00 [I,C*]; C09D0161-04 [I,A]; C09D0161-14 [I,A] |
| JP 09302259 | ECLA | B01F017/00K; C09B067/00P10B8; C09D011/02B; C09D017/00 |
| | IPCI | C09C0003-10 [ICM,6]; C09C0003-10 [ICS,6]; B01F0017-52 [ICS,6]; C09D0011-00 [ICS,6]; C09D0011-02 [ICS,6]; C09D0161-14 [ICS,6]; C09D0161-00 [ICS,6,C*] |
| | IPCR | B01F0017-52 [I,C*]; B01F0017-52 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; C09B0067-00 [I,C*]; C09B0067-46 [I,A]; C09C0003-10 [I,C*]; C09C0003-10 [I,A]; C09D0011-00 [I,C*]; C09D0011-00 [I,A]; C09D0011-02 [I,C*]; C09D0011-02 [I,A]; C09D0011-10 [I,C*]; C09D0011-10 [I,A]; C09D0017-00 [I,C*]; |

C09D0017-00 [I,A]; C09D0161-00 [I,C*]; C09D0161-04 [I,A]; C09D0161-14 [I,A]
 ES 2135838 ECLA B01F017/00K; C09B067/00P10B8; C09D011/02B; C09D017/00
 IPCI C09D0017-00 [ICM,6]; C09D0011-02 [ICS,6]
 IPCR B01F0017-52 [I,C*]; B01F0017-52 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; C09B0067-00 [I,C*];
 C09B0067-46 [I,A]; C09C0003-10 [I,C*]; C09C0003-10 [I,A]; C09D0011-00 [I,C*]; C09D0011-00 [I,A];
 C09D0011-02 [I,C*]; C09D0011-02 [I,A]; C09D0011-10 [I,C*]; C09D0011-10 [I,A]; C09D0017-00 [I,C*];
 C09D0017-00 [I,A]; C09D0161-00 [I,C*]; C09D0161-04 [I,A]; C09D0161-14 [I,A]
 CA 2193763 ECLA B01F017/00K; C09B067/00P10B8; C09D011/02B; C09D017/00
 IPCI C09D0017-00 [ICM,6]; C09D0011-02 [ICS,6]; C09D0007-02 [ICS,6]
 IPCR B01F0017-52 [I,C*]; B01F0017-52 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; C09B0067-00 [I,C*];
 C09B0067-46 [I,A]; C09C0003-10 [I,C*]; C09C0003-10 [I,A]; C09D0011-00 [I,C*]; C09D0011-00 [I,A];
 C09D0011-02 [I,C*]; C09D0011-02 [I,A]; C09D0011-10 [I,C*]; C09D0011-10 [I,A]; C09D0017-00 [I,C*];
 C09D0017-00 [I,A]; C09D0161-00 [I,C*]; C09D0161-04 [I,A]; C09D0161-14 [I,A]
 ECLA B01F017/00K; C09B067/00P10B8; C09D011/02B; C09D017/00
 AB A pigment dispersion is claimed comprising a pigment, a pigment dispersant, and, optionally, a binder resin. The pigment dispersion comprises, as pigment dispersant(s), ≥ 0.2 parts of a modified novolak resin (A) and/or a graft copolymer (B) relative to 100 parts of the pigment, (A) and (B) each having an aromatic ring and a ring structure given by ring opening of an epoxy group by a carboxyl group of a hydroxycarboxylic acid or their derivative Ink compns. for offset printing containing the pigment dispersion are also disclosed. A typical title composition was prepared by mixing and milling polyethylene wax and rosin-modified phenolic resin (Tespel 1355) varnish in a mixture of linseed oil and a com. solvent (Solvent Number 5) with an ink base containing Cu phthalocyanine pigment, reaction product of poly(12-hydroxystearic acid) with glycidyl methacrylate-styrene copolymer (preparation given) as pigment dispersant, Tespol 1355, linseed oil and Solvent Number 5.
 ST offset printing ink compn pigment dispersant; pigment dispersant modified novolak resin prepn; hydroxystearic acid polymer deriv prepn dispersant; polyhydroxystearate glycidyl methacrylate ester macromer dispersant; styrene glycidyl methacrylate copolymer pigment dispersant
 IT Polyesters, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (aliphatic, reaction products, with glycidyl Ph ether and phenol and formalin, dispersants; polymeric dispersants, pigment dispersions and offset printing ink compns.)
 IT Phenolic resins, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material

10551130

use); PREP (Preparation); USES (Uses)
(epoxy, reaction products, with poly(12-hydroxystearic acid),
stearates, dispersants; polymeric dispersants, pigment dispersions and
offset printing ink compns.)

IT Inks
(lithog.; pigment dispersion and offset printing ink composition
containing
modified novolak resins or polyesters as pigment dispersing agents)

IT Phenolic resins, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(modified with 12-hydroxystearic acid-glycidyl Ph ether reaction
products, dispersants; polymeric dispersants, pigment dispersions and
offset printing ink compns.)

IT Phenolic resins, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(novolak, reaction products, with 12-hydroxystearic acid-glycidyl Ph
ether condensate, dispersants; polymeric dispersants, pigment
dispersions and offset printing ink compns.)

IT Epoxy resins, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(phenolic, reaction products, with poly(12-hydroxystearic acid),
stearates, dispersants; polymeric dispersants, pigment dispersions and
offset printing ink compns.)

IT Dispersing agents
Pigments, nonbiological
(pigment dispersion and offset printing ink composition containing
modified
novolak resins or polyesters as pigment dispersing agents)

IT Linseed oil
RL: TEM (Technical or engineered material use); USES (Uses)
(pigment dispersion and offset printing ink composition containing
modified
novolak resins or polyesters as pigment dispersing agents)

IT 192709-74-3P, 12-Hydroxystearic acid-Styrene copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(dispersant; polymeric dispersants, pigment dispersions and offset
printing ink compns.)

IT 57-11-4DP, Octadecanoic acid, esters with Epikote 154 and
poly(hydroxystearic acid), uses 64-19-7DP, Acetic acid, esters with
Epikote 154 and poly(hydroxystearic acid), uses 101-90-6DP, Resorcinol
diglycidyl ether, reaction products with phenol novolak resin
106-14-9DP, 12-Hydroxystearic acid, reaction products with glycidyl Ph
ether and phenol novolak resin 110-15-6DP, Butanedioic acid, esters
with
Epikote 154 and poly(hydroxystearic acid), uses 122-60-1DP, reaction
products with 12-hydroxystearic acid and phenol novolak resin
124-30-1DP, 1-Octadecanamine, amides with Epikote 154 and
poly(hydroxystearic acid) 4223-14-7DP, reaction products with modified
phenol novolak resin 9003-35-4DP, modified with 12-hydroxystearic
acid-glycidyl Ph ether reaction products 15895-57-5DP, reaction
products

10551130

with phenol novolak resin 25167-42-4DP, Glycidyl methacrylate-Styrene copolymer, reaction products with poly(hydroxystearic acid) 27924-99-8DP, 12-Hydroxystearic acid polymer, reaction products with glycidyl Ph ether and phenol novolak resin 27941-02-2DP, 12-Hydroxystearic acid polymer, sru, reaction products with epoxy-containing polymers 29564-58-7DP, Glycidyl methacrylate-Methyl methacrylate-Styrene copolymer, reaction products with poly(hydroxystearic acid) 52300-37-5DP, reaction products with modified phenol novolak resin 63939-13-9DP, Epikote 154, reaction products with poly(hydroxystearic acid), stearates 66251-30-7DP, Glycidyl methacrylate-Vinyltoluene copolymer, reaction products with poly(hydroxystearic acid) 67076-27-1DP, p-Chlorostyrene-Glycidyl methacrylate copolymer, reaction products with poly(hydroxystearic acid) 86249-19-6DP, Benzyl methacrylate-Glycidyl methacrylate copolymer, reaction products with poly(hydroxystearic acid) 94290-63-8DP, 2,3-Epoxy-2-methylpropyl methacrylate-Styrene copolymer, reaction products with poly(hydroxystearic acid) 192709-72-1DP, Dimethylstyrene-Glycidyl methacrylate copolymer, reaction products with poly(hydroxystearic acid) 192709-73-2P, 12-Hydroxystearic acid polymer glycidyl methacrylate ester-Styrene graft copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dispersants; polymeric dispersants, pigment dispersions and offset printing ink compns.)

IT 147-14-8P, Copper phthalocyanine
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pigment; polymeric dispersants, pigment dispersions and offset printing ink compns.)

IT 192828-15-2, Tespol 1355
RL: TEM (Technical or engineered material use); USES (Uses)
(varnish; polymeric dispersants, pigment dispersions and offset printing ink compns.)

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
UPOS.G Date last citing reference entered STN: 16 Feb 2009
OS.G CAPLUS 2006:564323; 2002:978263; 2002:946378; 1999:726113

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1987:41630 CAPLUS
DN 106:41630
OREF 106:6805a,6808a
ED Entered STN: 07 Feb 1987
TI Radiation-sensitive negative-working resists
IN Obara, Hidekatsu; Shimizu, Akihiro; Yokota, Akira; Nakane, Hisashi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03C001-71
ICS G03C005-08; G03F007-10
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other

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Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 61148445 | A | 19860707 | JP 1984-270753 | 19841224 |
| | JP 06044153 | B | 19940608 | | |
| PRAI | JP 1984-270753 | | 19841224 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| JP 61148445 | ICM | G03C001-71 |
| | ICS | G03C005-08; G03F007-10 |
| | IPCI | G03C0001-71 [ICM,4]; G03C0005-08 [ICS,4]; G03F0007-10 [ICS,4] |
| | IPCR | G03C0005-08 [I,C*]; G03C0005-08 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]; G03F0007-20 [I,C*]; G03F0007-20 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A] |
| | ECLA | G03F007/038 |

AB The resists having firm bonding to substrates and especially high resistance to dry etching are composed of a polymer or a copolymer having repeating units -H₂CCRR₁- (R = H, Me; R₁ = OCOR₂, COOR₂, COOCH₂R₂; R₂ = haloalkyl-substituted Ph). Thus, poly(vinyl benzoate) was prepared by polymerization of 100 g vinyl benzoate with AIBN. The obtained polymer was chloromethylated using chloromethyl ether and AlCl₃. The obtained polymer contained 58 mol% chloromethyl group and its solution (of 10 g) was applied on a pattern-etched Si substrate deposited with a 0.5-μ Al layer and then dried to obtain a 1-μ layer. Exposure to UV through a quartz pattern mask and development in a Me Cellosolve-isoamyl acetate mixture followed by rinsing with iso-PrOH gave a 0.5-μ line pattern, which was postbaked at 140°. Dry etching in a CCl₄-He mixture rapidly etched the Al layer but did not affect the resist layer. Reetching in O₂ removed the resist layer to obtain a 0.5-μ Al pattern with steps on the surface.

ST neg photoresist dry etching resistant; halomethylated polymer photoresist etching resistant; lithog neg photoresist etch resistant

IT Resists (photo-, neg.-working, dry etching-resistant, halomethylated polymers as)

IT 24991-32-0D, Poly(vinyl benzoate), chloromethylated 26838-25-5D, Benzyl methacrylate-methyl methacrylate copolymer, chloromethylated 86249-19-6D, chloromethylated 106143-11-7D, bromoethylated

RL: USES (Uses) (lithog. photoresist, neg.-working, dry etching-resistant)

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(FILE 'HOME' ENTERED AT 16:42:14 ON 01 DEC 2009)

10551130

FILE 'CAPLUS' ENTERED AT 16:42:28 ON 01 DEC 2009
L1 1 S JP58048048/PN

FILE 'REGISTRY' ENTERED AT 16:43:24 ON 01 DEC 2009
L2 1 S 86249-19-6/RN
SET NOTICE 1 DISPLAY
SET NOTICE LOGIN DISPLAY

FILE 'CAPLUS' ENTERED AT 16:43:41 ON 01 DEC 2009
L3 16 S L2
L4 15 S L3 NOT L1

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

51.20

60.57

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-12.30

-13.12

STN INTERNATIONAL LOGOFF AT 16:44:25 ON 01 DEC 2009